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A Revision of the Genus
Capsicum with Especial
Reference to Garden Varieties

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A REVISION OF THE GENUS CAPSICUM WITH ESPECIAL
REFERENCE TO GARDEN VARIETIES.

BY H. C. IRISH.

A revision of the genus *Capsicum* * from an agricultural rather than a strictly botanical standpoint, was first suggested by Dr. E. Lewis Sturtevant,† who afterward himself selected the subject for special study and began collecting and cultivating a large number of kinds, at the same time recording complete descriptions from living plants. In 1892 all of his material bearing upon the subject, including many herbarium specimens, drawings, colored plates and notes was given to the Missouri Botanical Garden ‡ on condition that the genus should receive study with a view to the ultimate publication of the results in monographic form. All garden varieties which were procurable, together with numerous so-called species, have been cultivated at the Garden for four years, furnishing valuable material in the prosecution of the work. In beginning operations, Mr. F.

* Tournef. Inst. 152. 1700.—Linn. Gen. Pl. 195. 1742.—Jussieu, Gen. Pl. 126. 1789.—Linn. Syst. Pl. 1: 1050. 1797 [ed. Willd.].—Miller, Gard. Dict. 1797 [ed. Martyn].—Willd. Enum. Hort. Berol. 237. 1809.—Kunth, Nov. Gen. Sp. Pl. 3: 48. 1818.—Fingerh. Monogr. Gen. Capsici. 1832.—Nees von Esenb. Trans. Linn. Soc. 17: 62. 1832.—Meisner, Pl. Gen. 277. 1836-43.—Don, Hist. Dich. Pl. 4: 444. 1838.—Endlicher, Gen. Pl. 665. 1840 [no. 3854].—Sendt. in Martius, Fl. Bras. 10: 142. 1846.—Dunal in DC. Prodr. 13¹: 411. 1852.—Miquel, Fl. Ned. Ind. 2: 657. 1856.—Benth. & Hooker, Gen. Pl. 2: 892. 1876.—Nicholson, Dict. Gard. 1884.—Baillon, Hist. Pl. 9: 331. 1888.—Engler & Prantl, Pflanzenfam. 4^{3b}: 20. 1891.—Kuntze, Revis. Gen. Pl. 447. 1891.

English, *Red Pepper*, *Guinea Pepper*.—French, *Piment*, *Poivre d'Inde* ou *de Guinée*.—German, *Spanischer Pfeffer*.—Italian, *Peperone*.—Mexican, *Chilli*.—Hindustan, *Tschili*.—Hungarian, *Paprika*.—Spanish, *Pimiento*.—Portuguese, *Pimento*, *Pimentas*.

† American Naturalist 25: 550. 1885.

‡ Rept. Mo. Bot. Gard. 4: 15. 1893.

W. Dewart, at that time Botanical Assistant at the Garden, made numerous observations, especially noting structural characters. Later Mr. J. G. Smith continued the work, following much the same plan. My own study of this genus began in the spring of 1896 with bringing together the material left by others, recording observations on the growing plants of that year, and comparing them with previous notes. In addition to the work of the gentlemen named, I am especially indebted to Professor William Trelease for valuable assistance and suggestions in all parts of the work.

Concerning the early history of *Capsicum*, there is abundant evidence that the entire genus had its origin in the American tropics, though numerous so-called species have been attributed to Southern Asia. It seems to have been first mentioned by Peter Martyn in an epistle dated September 1493, in which he says Columbus brought home "pepper more pungent than that from Caucasus." * De Candolle advances the opinion that a plant so easily grown and so agreeable to the tastes of inhabitants of warm countries would probably have been known previous to the discovery of America, whereas no ancient Sanskrit or Chinese name for the genus is known, neither were the Greeks, Romans, nor even Hebrews acquainted with it.† The rapidity with which the plants spread in tropical countries, together with the increased commercial trade immediately following the discovery of America, probably caused a rapid dissemination through the Old World tropics, where the plants were afterwards found by later botanists, many of whom supposed them to be indigenous.

The opinion of different authorities seems to vary greatly concerning the number of species and varieties. Three varieties were figured by Fuchsius in 1542, thirteen by Gregorius in 1611, twenty by Parkinson in 1640. Thirty-five were mentioned by Morison in 1699, twenty-seven by

* Sturtevant, *American Naturalist* 24: 151. 1890.

† De Candolle, *Origin of Cultivated Plants* 288. 1882.

Tournefort in 1700, eighteen by Miller in 1731, though in 1771, after the binomial system had come into use, he gave but ten specific names. Linnaeus in the first edition of his *Species Plantarum* (1753) records two species, and in his *Mantissa* (1767) recognizes two additional ones. In the fourteenth edition of his *Systema Vegetabilium*, edited by Murray (1789), one new species is given, and in the Willdenow edition of the *Species Plantarum* (1797) still another is added. Römer and Schultes, in their edition of the *Systema Vegetabilium* (1819), add what they consider fifteen good and three doubtful species to those already described since the time of Linnaeus. Of these fifteen, only one was given for the first time by them, all of the others having been previously named by various botanists since Willdenow's edition. In 1832 Fingerhuth recognized twenty-five accepted species, together with seven requiring further examination, and twenty-eight botanical varieties, three of the species and most of the varieties being named by him. In 1846 Sendtner recorded ten species and numerous varieties as occurring in Brazil alone, he having named seven of the species. In 1852, Dunal recorded fifty accepted species, of which eleven were described for the first time, together with many varieties, and eleven species requiring further examination, besides three doubtful ones.

This was the last revision of the genus, and but three new species have since been described. Altogether about ninety specific names have been given, of which the *Index Kewensis* recognizes fifty-four as good. Notwithstanding this large number, modern authorities generally believe that there are only a few. Professor Asa Gray, in a letter to Dr. Sturtevant under date of Nov. 2, 1887, expresses a fancy that there are only two species in the genus.* Dr. Sturtevant, who had already made a considerable study of the genus, expressed the opinion that the published species in a majority of cases were only forms, and that when these were reduced to synonyms

* *Agricultural Science* 2: 1. 1883.

the number of species that would be accepted by botanists would be very small.* Dr. H. H. Rusby wrote Dr. Sturtevant, April 9th, 1883, saying: "I have seen a good deal of the genus in South America and have observed a great tendency to variation. I have seen but few well distinguished forms and about these are grouped hosts, presenting every shade of variation in size, color, form, and surface-planes of fruit. There are corresponding differences in pungency and flavor, in detecting which the natives are very expert. Each man will have some cherished plant that to him is very distinct, and far superior to anything that his neighbors can boast."

In regard to the great variability of *Capsicum*, Professor G. S. Jenman, of the Government Botanist's Office at Georgetown, British Guiana, wrote Mr. Dewart, August 24, 1892, that the genus there presents an infinite variety, and where several kinds are grown together the fruit of particular forms is often much modified by cross-fertilization, though this apparently does not apply to all varieties. Professor J. H. Hart, Superintendent of the Botanical Department of the Royal Botanical Gardens at Trinidad, during the same year wrote Mr. Dewart as follows: "We do not make any specific distinction between the *Capsicums* from here for the simple reason that they degenerate so quickly to a simple form under cultivation that we cannot refer them to more than a single species. Some of the finest will in four or five generations be nothing more than 'Bird-pepper' of which the forms are as many as the days of the year."

My work mainly adds strong testimony to the observations of these gentlemen. A number of well-marked types have been preserved for centuries, and within them various forms have constantly appeared. Upon these forms, in my opinion, a large number of the so-called species have been based. I have therefore separated them into two species and preserved the well-fixed types as botanical

* *Agricultural Science* 2: 1. 1888.

varieties. Most of the modern garden varieties easily find classification within the types of the annual species, some of them almost exactly corresponding with the wood cuts and descriptions of some very old forms. Many of the varieties from South America and Mexico present, to my mind, sufficiently distinct characters in habit of growth and in the woodiness of the plants to justify their treatment as representatives of two species.

Primarily, the classification of the types is based on the shape of the fruit and the calyx characters, as the most closely related ones can thus be brought together. The erect and pendent fruit, the primary characters of Fingerhuth and Dunal, are equally constant, but cannot be employed primarily in this classification, as both characters appear in all but two of the types here given as botanical varieties, and hence can only be used in separating the forms within these types.

In citing prelinnean authorities* I have included only the descriptions which have been carefully studied and about which I had no doubt as to the type or form intended. The descriptions of a number are so brief and incomplete that they could not be definitely located, hence it seemed wise to omit them entirely. Most of the modern works to which I have had access and which give fairly complete descriptions are referred to unless some doubt exists as to the intention of the author.

In the selection of names for the garden varieties, the principles for the nomenclature of cultivated plants adopted by the Vegetable Committee of Experiment Station Horticulturists † and the Madison Botanical Congress ‡ have been followed. In the citation of varietal synonyms reference is made to the earliest and most complete descriptions in

* For the full titles of works published prior to 1753, reference should be made to the catalogue of the Sturtevant Prelinnean Library.— Rept. Mo. Bot. Gard. 7: 123-209. 1896.

† Bailey, *Annals of Horticulture* 106-107. 1889.

‡ Proceedings of the Madison Botanical Congress 41. 27 Aug. 1893.

such seed catalogues as I have seen, except where equally satisfactory accounts were found in other publications.

The economic value of the fruit has long been known. The southern natives used it as much in ancient times as they do at present. Oviedo, who reached tropical America from Spain in 1514, particularly mentions its uses.* Chanca, physician to the fleet of Columbus in his second voyage to the West Indies, in a letter written to the Chapter of Seville in 1494, alludes to it as a condiment.† Its use for this purpose is also mentioned by subsequent writers. In Spain and India as early as the sixteenth century the fruit was employed in dressing meats and was supposed by some to be valuable for dyeing. Medicinally the red pepper was known to assist in the digestion of meats, and when mixed with honey and applied externally was a remedy for quinsy. Mention is also made of its removing freckles from the skin.‡ It was given for dropsy, colic, ague, toothache, and other ailments.§ The fruit was given to horses and mules for “dry gripes” brought on by rank and sour grass.¶ Later, a preparation of *Capsicum* was given in case of black vomit, and various tropical fevers,|| and has been recommended for atonic gout, dyspepsia accompanied by flatulence, tympanitis, paralysis, cynanche maligna and scarlatina maligna.** At the present time *Capsicum* is employed in medicine mainly as an astringent in the form of a tincture. The ground fruit is used in combination with quinine for malarial fever. When mixed with turmeric and some spice, it forms Curry Powder. The pungency †† is due to an active principle called “cap-

* Sturtevant, *American Naturalist* 19: 544. 1885.

† Flückiger & Hanbury, *Pharmacography* 452. 1879 [Engl. ed.].

‡ Gerarde, *Herball* 293. 1597.

§ Parkinson, *Theat. Bot.* 359. 1640.

¶ Miller, *Gard. Dict.* 1797 [ed. Martyn].

|| Phillips, *Cult. Veg.* 1: 118. 1822.

** Lindley, *Veg. Kingdom* 621. 1853.

†† The burning sensation occasioned by eating the pungent varieties may be checked by drinking milk.

saicin" which occurs mainly in the placenta and seed and which is volatile when exposed to the air. In its effects Capsicum is a stimulant, stomachic, and a rubefacient.*

Commercially the red pepper is employed more as a condiment than for any other purpose, and it is used as a seasoning in almost every dish by the inhabitants of warm climates. Cayenne Pepper is one of the important products, consisting mainly of the fruit of the small pungent varieties reduced to a fine powder. It is sometimes prepared by mixing wheat flour with the dried fruit and making into cakes with yeast. After baking until quite hard and brittle these are reduced to powder and sifted. When prepared in this manner it has been known under the name *Cayenne Pepper Pot*,† and when simply dried, powdered, and mixed with a little salt, it has been known as *Cayan Butter*.‡ According to the *Encyclopaedia Britannica*, *Mandram* is a West Indian stomachic prepared by mashing a few pods of bird pepper and mixing them with sliced cucumbers and shallots to which have been added a little lime-juice and Madeira wine.

There are various brands of pepper sauce, which consist chiefly of the unground fruit of the pungent varieties preserved in brine or strong vinegar. Tabasco Pepper Sauce or liquid pepper is said to be the pulp of the ripe fruit of the Tabasco variety extracted by pressure and so handled as to retain all flavor, strength, aroma and color of the ripe fruit. Tabasco Catchup is made from the same variety. Paprika is a well-known Hungarian condiment made from the fruit which is ground after the seeds have been removed, and is, therefore, much less pungent than the Tabasco sauce. Chilli con carne consists of the small pungent peppers finely ground and mixed with meat. It is much used in the Southern United States. In Mexico the fruit forms a very essential ingredient in the tamales so

* Waggaman, Bot. Mat. Med. 228. 1895.

† Phillips, Cult. Veg. 1: 123. 1822.

‡ Miller, Gard. Dict. 1797 [ed. Martyn].

common in that country and quite well known in the Southern United States.

Many of the kinds of *Capsicum* are more or less employed either in pickles or in the raw or cooked state, the milder sorts being much preferred by northern consumers and the more pungent ones by the southern people. They are sliced and either mixed with salads or served like tomatoes with vinegar and salt. The thick-fleshed bell-shaped and squash varieties are much used as mangoes. These are made by cutting the fruit down one side, removing the seed, and filling with chow-chow pickles. The parts are then tied together and the whole placed in jars or cans containing vinegar where it remains until wanted. Some of the medium-sized pungent varieties are eaten by native Mexicans in the raw state, the same as radishes. I am told by a reliable firm, who manufacture pepper sauce, that in Spain some of the large sweet varieties, which with us are often stuffed and baked, are canned after being cooked in olive oil, and are then eaten with French salad dressing without further cooking. In this condition, too, the fruit is often employed in stuffing pitted olives.

Aside from its value as a food and a medicine, *Capsicum* has been recommended as an insecticide when used in connection with tobacco-paper,* but inasmuch as the operation was not a success without the latter it is probable that tobacco was the essential ingredient. The seed is considered a very healthful bird food, and is used to some extent for that purpose.

In Europe, some varieties, such as Little Gem and Prince of Wales, are grown considerably for decorative purposes, especially in pots, under glass.

The culture of the pepper is comparatively simple. It does not require special care and yet quickly responds to any particular attention which may be given it. A warm and moderately light soil that does not quickly dry out appears to be the best. The seed generally requires from

* Gard. Chron. 150. 1852.

twelve to twenty days to germinate, the exact time depending upon its age. The plants are usually started under glass in February or March and transplanted into pots or flats when large enough to handle. After all danger of frost is past, they are moved to the field and planted one or two feet apart. The ground around the plants is thoroughly cultivated during the growing season, and in case of extreme drouth artificial irrigation is sometimes resorted to.

Its culture does not appear to be especially confined to any particular locality but is generally distributed throughout temperate and tropical regions for the supply of local markets. *Capsicum frutescens* is confined mostly to Southern Asia, Africa, Mexico, and South and Central America. The large Sweet Spanish variety is largely cultivated in Spain, and various varieties for the manufacture of Paprika are extensively grown in Hungary. The Tabasco variety is almost exclusively confined to one locality in Louisiana. There is considerable local demand, as pickles, mangoes and pepper sauces are quite extensively manufactured in St. Louis, and the supply for them is largely grown in this vicinity.

Fortunately peppers are not subject to attack by insects. Red spider and greenfly (*Aphis*) are the only known Arthropod enemies, and their depredations are confined mainly to plants grown under glass. The red spider may be kept in check by repeatedly syringing with water, and the greenfly may be killed by fumigating with tobacco.

There are two fungus diseases which frequently occur, especially upon the larger thick-fleshed varieties. One of them Dr. Halsted * calls an anthracnose of the pink sort, due to *Gloeosporium piperatum* E. & E., which causes the fruit to rot about the time it is maturing. The other disease is a dark anthracnose, due to *Colletotrichum nigrum*.†

* Rept. N. J. Exp. Sta. 326. 1892.

† Halsted, Bull. Torrey Bot. Club 18: 15. 1891.

ARTIFICIAL KEY TO GARDEN PEPPERS.

* Peduncles straight; fruit erect or spreading.

+ Calyx embracing base of fruit, the latter much longer than broad.

++ Fruit short, usually less than $1\frac{1}{2}$ in. long; peduncles nearly as long or longer.

Plant $2\frac{1}{2}$ ft. or more high, maturing slowly and rarely ripening fruit except in extreme south. *C. frutescens*.

Plant ripening its fruit earlier, usually not over $1\frac{1}{2}$ ft. high except for the first variety. *C. annuum conoides*.

Fruit usually compressed at the base by the calyx; plant at least 2 ft. high. TABASCO.

Fruit not compressed at the base by the calyx.

Dark red.

Oblong fusiform. CORAL GEM.

Conical or ovate obtuse. CAYENNE.

Orange red. ORANGE-RED CLUSTER.

++ ++ Fruit usually more than $1\frac{1}{2}$ in. long, slender, largest diameter usually less than $\frac{1}{2}$ in.; peduncles shorter; flesh very thin (about $\frac{1}{4}$ in.).

Plant about 1 ft. high; leaves and fruit fascicled.

C. annuum fasciculatum.

Fruit red. RED CLUSTER.

Fruit yellow. YELLOW CLUSTER.

Plant larger; leaves and fruit not fascicled.

C. annuum acuminatum.

Fruit red. CHILLI.

Fruit yellow. YELLOW CHILLI.

+ + Calyx not usually embracing base of fruit, or only obscurely so; fruit usually more than $1\frac{1}{2}$ in. long, largest diameter usually more than $\frac{1}{2}$ in.; flesh somewhat thicker. *C. annuum longum*.

Petals more or less purple; fruit black at first, becoming orange-red. BLACK NUBIAN.

Petals white; fruit green, becoming red when ripe.

LONG RED.

+++ Calyx not embracing base of fruit, the latter slightly longer than broad, subconical, ovate, or oblong, usually $\frac{3}{4}$ in. to 2 in. long.

C. annuum abbreviatum.

Fruit bright red when ripe.

Changing from green to light yellow or straw color before ripening, subrugose, not turbinate.

Usually mucronate, oval. KALEIDOSCOPE.

Not mucronate, subconical. CELESTIAL.

Not changing to light yellow.

Very rugose, often turbinate. RED WRINKLED.

Neither rugose nor turbinate. ETNA.

Fruit yellow when ripe.

With longitudinal furrows, rarely turbinate.

PRINCESS OF WALES.

Not furrowed, usually very rugose and turbinate.

YELLOW WRINKLED.

± ± Calyx not embracing base of fruit, the latter spherical or heart-shaped, smooth.

C. annuum cerasiforme.

Fruit usually less than $\frac{1}{2}$ in. in diameter.

Red.

LITTLE GEM.

Yellow.

PRINCE OF WALES.

Fruit usually $\frac{1}{2}$ in. to 1 in. in diameter.

Round or cherry shaped.

Red.

CHERRY.

Yellow.

YELLOW CHERRY.

Heart-shaped.

Red.

OXHEART.

Yellow.

YELLOW OXHEART.

± ± + Calyx not embracing base of fruit, usually seated in a basal depression.

Fruit red, subconical or prismatic.

BRAZILIAN UPRIGHT.

Fruit yellow.

GOLDEN UPRIGHT.

**Peduncles curved or recurved; fruit pendent.

+ Calyx embracing base of fruit, the latter much longer than broad.

→ Fruit very slender, usually less than $\frac{1}{2}$ in. in diameter; flesh very thin (about $\frac{1}{4}$ in.).

C. annuum acuminatum.

$\frac{3}{4}$ to $1\frac{1}{2}$ in. long.

Red.

NEPAL CHILLI.

Yellow.

YELLOW NEPAL CHILLI.

$1\frac{1}{2}$ to 4 in. long.

Red.

LONG CAYENNE.

Yellow.

LONG YELLOW CAYENNE.

→ → Fruit stouter; flesh thicker, often furrowed longitudinally.

IVORY TUSK.

+ + Calyx not embracing base of fruit, the latter much longer than broad, mostly stout, tapering.

C. annuum longum.

Petals purple; fruit black at first, becoming orange-red.

BLACK NUBIAN.

Petals white; fruit red or yellow.

Calyx usually not entirely covering the flat base of fruit.

Flesh about $\frac{1}{8}$ in. thick, only slightly pungent.

COUNTY FAIR.

Flesh thinner, very acrid pungent; fruit slender for the group.

LONG RED.

Calyx usually covering the base, but at most obscurely embracing it.

Fruit red.

CARDINAL.

Fruit yellow.

LONG YELLOW.

Calyx usually seated in a basal depression.

Apex distinctly 3 to 4 lobed.

ELEPHANT'S TRUNK.

Apex pointed or obscurely lobed.

PROCOPP'S GIANT.

- † + Calyx not embracing base of fruit, usually seated in a basal depression; fruit swollen, angular. *C. annuum grossum*.
 Fruit subconical, decidedly tapering. EMPEROR.
 Fruit prismatic or subconical, slightly tapering to a 3 to 4 lobed apex.
 Subconical. MONSTROUS.
 Prismatic. SWEET SPANISH.
 Fruit squarish, subtruncate, about as long as broad.
 Apical end usually much contorted, often larger than base; fruit 2 to 3 in. in diameter. BELL.
 Apical end not usually contorted, but quite uniformly lobed; fruit larger than last.
 Red. SWEET MOUNTAIN.
 Yellow. GOLDEN DAWN.
 Fruit squarish, subtruncate, longer than broad, deeply furrowed and lobed, 5 to 7 in. long, 3 to 4 in. in diameter.
 Red. RUBY KING.
 Yellow. GOLDEN KING.
 Fruit 2 to 3 in. broad, very oblate.
 Red. SQUASH.
 Yellow. YELLOW SQUASH.
 † † Calyx not embracing base of fruit, the latter slightly longer than broad, subconical, ovate, or oblong, usually $\frac{3}{4}$ in. to 2 in. long. *C. annuum abbreviatum*.
 Fruit bright red when ripe.
 Changing from green to bright yellow or straw color before ripening, subrugose, not turbinate.
 Oval, usually mucronate. KALEIDOSCOPE.
 Not changing to light yellow, very rugose, often turbinate. RED WRINKLED.
 Fruit yellow when ripe.
 Longitudinally furrowed, rarely turbinate. PRINCESS OF WALES.
 Not usually furrowed, very rugose, turbinate. YELLOW WRINKLED.
 † † + Calyx not embracing base of fruit, the latter spherical or heartshaped, smooth, usually $\frac{3}{8}$ in. to $1\frac{1}{4}$ in. in diameter. *C. annuum cerasiforme*.
 About $\frac{3}{8}$ in. in diameter, yellow. PRINCE OF WALES.
 Round or cherry shaped, $\frac{1}{2}$ to $1\frac{1}{4}$ in. in diameter.
 Red. CHERRY.
 Yellow. YELLOW CHERRY.
 Heartshaped.
 Red. OXHEART.
 Yellow. YELLOW OXHEART.

SYNOPSIS.

A Herbaceous or suffrutescent, annual or biennial.

C. ANNUUM L.

Capsicum annuum Linn. Hort. Cliff. 59. 1737.

Herbaceous or suffrutescent plants usually growing two or three feet high, sometimes four or five, rarely only a foot, with numerous erect angular branches usually rising from near the ground, generally smooth, sometimes sparsely pubescent. Leaves medium small to very large, ovate acuminate to oblong elliptical; petioles smooth or sparingly hairy. Peduncles solitary, sometimes in twos, usually smooth. Corolla white or dingy white, except in one variety when it is more or less blotched with purple. Fruits variable in size, color and form.

This species furnishes all the leading commercial varieties now in cultivation. In temperate latitudes they are treated as annuals, while in tropical countries some varieties are biennial or perennial.

a Fruit oblong linear.

* Calyx usually embracing base of fruit.

+ Fruit usually less than 1½ in. long; peduncles about as long or longer.

C. annum conoides (Miller).

Capsicum conoides Miller, Gard. Dict. 1771 [no. 8. ed. 6].—Linn. Syst. 4: 562. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. Gen. Capsici 14. t. 3. f. b. 1832.—Don, Hist. Dich. Pl. 4: 446. 1838.—Rich. Fl. Abyss. 2: 96. 1851.—Dunal in DC. Prodr. 13¹: 414. 1852.—Seemann, Bot. Herald 402. 1852–57.—Miquel, Fl. Ned. Ind. 2: 659. 1856. *Capsicum conoides sulcatum* Fingerh. Monogr. 15. t. 3. f. c. 1832.—Dunal in DC. Prodr. 13¹: 415. 1852.

Capsicum conoides chordale Fingerh. l. c. f. d.—Dunal, l. c.

Capsicum conoides oblongo-conicum Dunal, l. c.

Piper oblongum, exiguum erectum pyramidale. Greg. de Reg. in Clus. Cur. Post. 97, f. 4, 98. 1611.—Jonstonus, Dendrog. t. 56. 1662.—Rafus, Hist. Pl. 1: 677. 1686.

Piper Indicum siliquis surrectis & oblongis diff. 3. majus et minus (excl. majus). Bauhin. Pinax 103. 1623.

Capsicum exiguum erectum pyramidale. Parkinson, Theat. Bot. 357. f. 6. 1640.

Capsicum minus fructu parvo pyramidal erecto. Sloane, Cat. Pl. Jam. 112. 1696.

Capsicum sive *Piper Indicum oblongum minus*. Morison, Hist. Pl. Oxon. 3: 529. 1699.

Capsicum sillquis surrectis & oblongis, exiguus. Tournef. Inst. 152. 1700.

Piper Indicum minimum erectum. [Beslerus], Hort. Eyst. 1. Autumn. Ord. 1: 8. f. 1. 1713.

Solanum mordens minus erectum. Weinmann. Phyt. Iconog. 4: 349. pl. 930. f. b. 1745.

Negro-pepper. Hughes, Hist. Barb. 213. 1750. Fide Maycock, Fl. Barb. 104. 1830.

Capsicum fructu minimo conico rubro. Browne, Hist. Jam. 176. 1756.

Plants suffrutescent, 1-2½ ft. high, diffusely spreading 1½-2 ft. Stem and lower branches striate, green, sparingly corky. Branches short between the nodes, often subpubescent. Leaves numerous, ovate lanceolate, acuminate, pubescent on midvein below, sparsely pubescent above, 2-3 in. long, ¾-2 in. wide, rarely larger, quite erect, smooth or subscabrous, usually rather dark green; petioles ¾-⅝ in. long, rather slender, pubescent or subglabrous. Peduncles solitary or often in twos, usually slender, stiff, straight, erect, slightly enlarged toward the calyx end. Calyx obconical or cup-shaped, usually embracing base of fruit; teeth obscure. Corolla greenish white, small, spreading ⅜-⅝ in. Fruit erect, subconical or oblong cylindrical, acuminate or obtuse, usually shorter than the peduncles, ¾-1¼ in. long, ¼-½ in. diam., 2-3 celled, red or yellow, sometimes blotched with purple before ripening, mostly borne above the leaves; flesh about ¼ in. thick, extremely pungent.

CORAL GEM.* The habit of growth of this variety is, apparently, subject to extreme variation in different localities, the plant in some places making a tender growth of not more than a foot, while in other places it attains a height of 2 ft. In the former case the branches are light green, quite flexible, frequently decumbent with numerous upright middle shoots, forming a rosette-like mass, and

* Vaughan, Cat. 1889.

the leaves but slightly darker on the upper surface than below. The larger growing plants are stouter and more branchy. Fruit usually slender, fusiform, smooth, extremely pungent, red, sometimes blotched with brown before ripening, usually scattered so thickly over the plant as to give the appearance of a bouquet of corals.—Plate 9, f. 2.

TABASCO.* Plant usually about $2\frac{1}{2}$ ft. high, with an erect spreading habit. Leaves often 4 in. long by $2\frac{1}{2}$ in. wide, dark green, usually distinctly pubescent along the veins. Fruit oblong cylindrical, obtuse or acute, usually compressed at the base by the calyx, deep red when ripe, the unripe ones often drying to an orange color, more frequently borne in twos than in other varieties of this group.

CAYENNE.† Plant more woody than others. Branches fewer but more erect, and quite rigid. Leaves deep green on upper surface, decidedly paler below. Calyx occasionally seated on base of fruit. Fruit usually as long as or slightly longer than the peduncles, subconical or ovate, obtuse, about $1\frac{1}{4}$ in. long, $\frac{1}{2}$ in. diam., at first green, changing to blackish, then yellowish-red, finally red.

ORANGE-RED CLUSTER.‡ Plants usually with a flattish top. Branches slender but rigid, purple striate, and decidedly purple at nodes. Leaves smooth, quite erect, very dark green on upper surface, much paler below. Fruit $1-1\frac{1}{4}$ in. long, about as long as or longer than peduncles, very rigidly erect, standing prominently above the leaves, of a beautiful orange-red color. The great number of fruits equally distributed over the symmetrical plant make it one of the most ornamental varieties.—Plate 9, f. 3

* Described from Dr. Sturtevant's notes and herbarium specimens. Seed received by him from McIlhenny of New Iberia, La., 1888.

† Hovey, Seed Cat. 1888.—Described from Dr. Sturtevant's notes and herbarium specimens. Seed received by him from Livingston, Columbus, O., 1888, who listed it as *Cayenne of Commerce*, in contrast with the *Long Cayenne*.

‡ Listed in Haage & Schmidt, Seed Cat. 15, 1893, under the German name *Orangerother Trauben-Pfeffer*.

- + Fruit usually more than $1\frac{1}{2}$ in. long; peduncles shorter.
++ Leaves and fruit fascicled; fruit erect.

C. annuum fasciculatum (Sturt.).

Capsicum fasciculatum Sturtevant, Bull. Torrey Bot. Club 15: 133. 1888.

“Stems smooth, green, round, subverrucose, swollen at the branchings and purple, dichotomous or trichotomous. Branches angular, few, erect-spreading, green, purple at insertion of petioles, subpubescent, bearing the leaves for the most part clustered or bunched at the swollen summits. Leaves spreading, crowded into bunches, nearly of one size, the larger ones $3\frac{3}{4}$ in. by $1\frac{1}{8}$ in., usually 3 in. by $\frac{3}{4}$ in., elliptical-lanceolate, pointed at both ends, from the base extending equally into the petiole, deep green above, paler below, the middle nerve distinct; slightly scabrous, entire or subrepand; borne almost entirely in a confused mass along with the berries at the summit of branches, very rarely lower down. Petioles smooth, nearly as long as, or sometimes even longer than the leaves, slender, margined by the extension of the leaf blade. Peduncles smooth, angular, thickish, erect, enlarging towards calyx end, rather long, $1\frac{1}{2}$ in., grouped in clusters rather confusedly with the leaves, but the tendency of the grouping seeming to be in twos or threes, axillary or extra-axillary. Calyx cyathiform, embracing base of fruit, obscurely ten or twelve-nerved (5 or 6 distinct), subpentagonal, subtruncate, five or six-toothed, the teeth acute, erect, smooth. Corolla white, quite large, about $\frac{7}{8}$ in. in diameter, the divisions very long and narrow, often twisted. Berry cylindro-conical, straight or curved, about 3 in. long, by $\frac{1}{4}$ in. diameter, or smaller, usually rugose, sometimes smooth, at first a shining green, then red; two-celled; the placenta thick at the base; acrid.

“This species differs principally from *Capsicum annuum*, Fingerhuth, by the round stem; pubescent and dichotomous or trichotomous branchings; freedom from lower leaves; the leaves clustered at summits; all of one size and

nearly or quite lanceolate; petioles as long as the leaves; the clustered peduncles; the white corolla with deep and narrow lacineæ, and the shining green of the unripe berry. The aspect of the plant is very distinct, the dark green lanceolate leaves closely clustered and so dense as to overlap, the low and spreading compact, bush-like appearance, the fruit crowded with the leaves, the bare and knobby-looking stems where exposed to view. As grown by me the plant was 1-1½ ft. high, and ripened its berries in September of the year when sown." *

RED CLUSTER.† This variety, and its yellow form, are the only ones included in this group. Professor Bailey alludes to it as one of the most distinct of any he ever grew.‡ Catalogue descriptions sometimes allude to it as a form, or sport, from Chilli. This is evidently true, as variations toward the Chilli type have often been observed.— Plate 3, f. 4.

YELLOW CLUSTER.§ Identical with the preceding except that the fruit is of a bright yellow color.

++ ++ Leaves and fruit not fascicled.

C. annum acuminatum Fingerh.

Plants herbaceous or suffrutescent, 1½-2½ ft. high, spreading 1½-2 ft. Branches numerous, erect or spreading, bearing a dense mass of foliage. Leaves solitary, sometimes semifascicled, 2-3½ in. long, 1-2 in. wide, avg. about 1½ by 2¼ in., ovate acuminate, deep green on upper surface, much paler below, sparsely pubescent on veins below; margins subciliate especially on younger leaves; petioles medium stout, ¾-1 in. long, generally smooth. Peduncles slender, enlarging toward calyx end. Calyx

* Original description of the species *fasciculatum*.

† Burpee, Cat. 1889.— *Japan Cluster*. Dreer, Cat. 1891.— French, *Piment à bouquet rouge*.— German, *Rother Trauben-Pfeffer*.— Japanese, *Tenjikumamori*, according to Sturtevant, l. c.

‡ Bull. Mich. Agr. Coll. 31: 38. Nov. 1887.

§ Haage & Schmidt, Cat. 1893.— German, *Gelber Trauben-Pfeffer*.

usually embracing base of fruit. Corolla medium, spreading $\frac{1}{2}$ – $\frac{3}{4}$ in., dingy white. Fruit very slender, $\frac{1}{2}$ – $4\frac{1}{2}$ in. long, $\frac{1}{4}$ – $\frac{3}{8}$ in. diam., smooth or subrugose, usually more or less curved, 2-celled; flesh very thin, about $\frac{1}{24}$ in. thick, extremely pungent, red or yellow. The long fruit of this and the preceding variety is sometimes called finger-pepper.

= Fruit erect.

CHILLI.* Plants about $2\frac{1}{2}$ ft. high, very branchy. Fruit borne about even with the leaves, at first a shining green afterwards becoming coral red, 2–3 in. long, nearly straight, smooth or subrugose; base sometimes slightly compressed by the calyx. This differs from Chili as described by Burr† in having shorter and erect fruit. Dr. Sturtevant's notes indicate both pendent and erect forms. Plants grown by us from seed of many sources produced almost

* *Red Chili*. Hovey, Cat. 1889.—*Chili Pepper*. Burr, Field & Gard. Veg. 622. 1863.—*Long Cayenne*. Hend. Cat. 1884.—*Chili Pepper*, or *Chillies*. Vilmorin-And. Veg. Gard. 151. 1885 [Eng. ed. Robinson].—*Chili*. Bailey, Bull. Mich. Agr. Col. 31: 38. 1887.—French, *Piment du Chili*.—German, *Chilenischer scharfer Pfeffer*.

Capsicum conicum Meyer, Fl. Esseq. 112. 1818.—Linn. Syst. 4: 809. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. Gen. Capsici 16. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 415. 1852.

Capsicum annuum acuminatum Fingerh. Monogr. Gen. Capsici 13. t. 2. f. c. 1832.—Dunal in DC. Prodr. 13¹: 412. 1852.

Capsicum conicum orientale. Dunal, l. c. 415.

Capsicum Chilense Hort. Vilmorin-And. Fl. Pleine Terre 885. 1870 [3d ed.].

Piper Indicum surrectis corniculis. Camerar. Hort. Med. 127. 1588.

Piper Indicum siliquis surrectis & oblongis. diff. 1. *Pyramidale majus*. 2. *pyramidale minus*. Bauhin. Pinax 102. 1623.

Capsicum siliquis surrectis & oblongis, brevibus. Tournef. Inst. 152. 1700.—Miller, Gard. Dict. 1771 [ed. 6].

Piper Indicum medium longum erectum. Hort. Eyst. 1. Aut. Ord. 1: 11. f. 2. 1713.

Capsicum surrectum, medium Styli forma. Tillus, Cat. Pl. Pisa. 30. 1723.

Solanum mordens fructu longo erecto. Weinmann. Phyt. 349. t. 228. f. e. 1745.

† Burr, Field and Gard. Veg. 611. 1865.

invariably erect fruit, and the few pendent ones properly belonged to the Long Cayenne variety.—Plate 10, f. 1.

YELLOW CHILLI.* Fruit usually more pyramidal in shape than the preceding, usually thicker and averaging somewhat shorter, otherwise differing only in being of a bright yellow color.—Plate 10, f. 2.

= = Fruit pendent.

LONG CAYENNE.† Plant vigorous, $1\frac{1}{2}$ – $2\frac{1}{2}$ ft. high. Branches numerous, medium stout, green, erect or upright.

* Seed from Professor L. H. Bailey, Cornell University, 1892.

Capsicum pyramidale Miller, Gard. Dict. 1771 [no. 7. ed. 6].—Linn. Syst. 4: 563. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. 1. c. 15. t. 3. f. e. 1832.—Don, Hist. Dich. Pl. 4: 446. 1838.—Dunal in DC. Prodr. 13¹: 414. 1852.—Miquel, Fl. Ned. Ind. 2: 661. 1856.

Capsicum torulosum Hornem. Hort. Hafn. Suppl. 27. 1819. Fide Index Kewensis.

Capsicum pyramidale torulosum Fingerh. Monogr. 15. 1832.—Dunal in DC. Prodr. 13¹: 414. 1852.

Capsicum pyramidale longicorne Dunal, 1. c.

Capsicum minus flavum. Rumph. Herb. Amb. 5: 248. t. 88. f. 3. 1747.

Capsicum siliquis surrectis & oblongis brevibus. Miller, Gard. Dict. 1771 [ed. 6].

† Vilmorin-And. Veg. Gard. 151. 1885 [Eng. ed. Robinson].—Cayenne. Bailey, Bull. Mich. Agr. Col. 31: 38. 1887.—French, *Piment de Cayenne*.

Capsicum longum DC. ex Fingerh. Monogr. Gen. Capsici 23. t. 6. f. d. 1832.

Capsicum longum ceratoides recurvum Dunal in DC. Prodr. 13¹: 424. 1852.

Capsicum longum Cayennense Hort. Vilmorin-And. Fl. Pleine Terre 884. 1870 [3d ed.].

Siliquastrum tertium. Fuch. Hist. Stirp. Basil. 733. f. 1542.

Capsicum oblongius. Fuch. Hist. Stirp. Basil. 426. f. 1545.

Siliquastrum oblongius. Fuch. Hist. Stirp. Lugd. 693. f. 1551.

Capsicum recurvis siliquis. Dodon. Hist. Stirp. Pempt. 704. f. 1583; 716. f. 1616.—Magnol, Hort. Monsp. 41. 1697.—Tournef. Inst. 152.

1700.—Tillus, Cat. Pl. Hort. Pisa. 30. 1723.—Boerhaave, Index Pl. Lugd.-Bat. 2: 68. 1727.—Miller, Gard. Dict. 1731 [no. 2].

Piper Indicum. Camerar. Pl. Epit. 347. f. 1586.

Siliquastrum varietas longum. Camerar. Pl. Epit. 348. f. 1586.

Leaves medium, dark green, $1\frac{1}{4}$ –3 in. long, $1-1\frac{1}{4}$ in. wide; petioles medium, $\frac{7}{8}$ – $1\frac{1}{2}$ in. long. Peduncles solitary, medium stout, $1-1\frac{1}{2}$ in. long, curved or recurved. Corolla white, spreading $\frac{3}{4}$ – $1\frac{1}{4}$ in. Fruit 3–4 in. long (rarely more), $\frac{1}{4}$ – $\frac{3}{8}$ in. diam., pendent, oblong acuminate, usually subrugose and more or less curved, usually transversely furrowed; flesh very thin and extremely pungent.—Plate 11, f. 3.

The earlier catalogue accounts of Cayenne, True Cayenne, or Small Cayenne, refer to another variety, here called Cayenne. Vilmorin mentions Long Cayenne as a sub-variety of Long Red and belonging to a different botanical species from the True Cayenne.

LONG YELLOW CAYENNE.* Identical with the preceding except that the fruit is of a bright yellow color.—Plate 12, f. 1.

Capsicum siliquis longis recurvis. Bauh. Phyt. 155. 1596.

Piper longum minus siliquis recurvis. Greg. de Reg. in Clus. Cur. Post. 101, f. 10, 102. 1611.—Jonstonus, Dendrog. t. 56. 1662.

Piper Calecuticum, sive Capsicum oblongius. Bauhin. Hist. Pl. Ebrod. 2: 943. 1651.

Chilli, *Piper siliquosum Mexicanum.* Hernand. Nov. Hist. Romae 1: 195. 1651.

Siliquastrum. Pancovius, Herb. f. 296. 1673.

Piper Capsicum. Chabreaeus, Sciag. 297. f. 1677.

Solanum Capsicum dictum, propendentibus siliquis oblongis recurvis. Hermann. Hort. Acad. Lugd.-Bat. 576. 1687.

Capsicum sive Piper Indicum minus siliquis recurvis. Morison, Hist. Pl. Oxon. 3: 529. 1699.

Solanum, urens siliqua propendente rubra. Morison, l. c. Sect. 13. t. 2. f. 1699.

Capsicum siliquis recurvis, minus. Tournef. Inst. 152. 1700.—Tillus, Cat. Pl. Hort. Pisa. 30. 1723.—Boerhaave, Index Pl. Lugd.-Bat. 2: 68. 1727.

Piper Indicum minus recurvis siliquis. Hort. Eyst. 1. Aut. Ord. 1: 6. f. 2. 1713.

Solanum mordens siliquis oblongis recurvis. Weinmann. Phyt. 349. t. 927. f. d. 1745.

* Henderson, Cat. 1884.

Capsicum longum luteum Fingerh. Monogr. t. 7. f. b. 1832.

NEPAL CHILLI.* Plants not distinguishable from Long Cayenne, of which it is probably a subvariety. Calyx occasionally not embracing base of fruit. Fruit $\frac{1}{2}$ – $1\frac{1}{4}$ in. long, $\frac{1}{4}$ – $\frac{3}{8}$ in. diam., oblong, cylindrical, or obtusely conical, smooth or often with a transverse depression on one side near the apex. Often varies so as to be almost identical with Long Cayenne.—Plate 11, f. 1.

YELLOW NEPAL CHILLI.† Identical with the preceding except that the fruit is of a bright yellow color.

* * Calyx not usually embracing base of fruit except in the Ivory Tusk variety.

C. annuum longum Sendt.

Capsicum annuum Linn. Fl. Zeyl. 38. 1747; Hort. Upsal. 47. 1748; Sp. Pl. 188. 1753.—Gouan, Hort. Reg. Monsp. 111. 1762.—Miller, Gard. Dict. 1771 [no. 1. ed. 6].—Aublet, Hist. Pl. Guiane 1: 219. 1775.—Linn. Syst. 226. 1784 [ed. 14. Murray].—Thunb. Fl. Japon. 93. 1784.—Loureiro, Fl. Cochín 1: 127. 1790; 1: 157. 1793 [ed. Willd.].—Gaertn. Fruct. et Sem. 2: 241. 1791.—Lamarck, Enc. Meth. 2: 26. 1793 [no. 2388].—Linn. Sp. Pl. 1: 1050. 1797 [ed. Willd.].—Miller, Gard. Dict. 1797 [ed. Martyn]. (In part).—Desfont. Fl. Atlant. 1: 196. 1798–1800.—Poiret, Enc. Meth. 5: 324.

* Seeds of this variety and of the *Yellow Nepal Chilli* were received from Saharanpur Garden in India in 1895. They are not known in cultivation in this country.

Capsicum pendulum Willd. Enum. Hort. Pl. Reg. Berol. 242. 1809.—Hornem. Hort. Hafn. 1: 224. 1813.—Linn. Syst. 4: 562. 1819 [ed. Röm. et Schult.].—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Fingerh. Monogr. 25. t. 7. f. d. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 425. 1852.

Capsicum pendulum minus Fingerh. Monogr. 25. 1832.—Dunal in DC. Prodr. 13¹: 425. 1852.

Capsicum pendulum torulosum Fingerh. l. c.—Dunal, l. c.

Capsicum pendulum majus. Dunal, l. c.

† *Capsicum Sinense* Linn. Syst. 226. 1784 [ed. 14. Murray].—Lam. Enc. Meth. 2: 26. 1793 [no. 2394].—Linn. Sp. Pl. 1: 1051 [ed. Willd.].—Miller, Gard. Dict. 1797 [ed. Martyn].—Poiret, Enc. Meth. 5: 326. 1804.—Persoon, Syn. Pl. 1: 229. 1805.—Hornem. Hort. Hafn. 1: 224. 1813.—Linn. Syst. 4: 564. 1819 [ed. Röm. et Schult.].—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Fingerh. Monogr. 26. t. 8. f. d. 1832.—Dunal in DC. Prodr. 13¹: 425. 1852.

Capsicum curvipes Dunal, l. c. 423.

- 1804.—Persoon, Syn. Pl. 1: 229. 1805.—Hornem. Hort. Hafn. 1: 223.
 1813.—Meyer, Fl. Esseq. 112. 1818.—Linn. Syst. 4: 559. 1819 [ed. Röm. et Schult.].—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Moon, Cat. Pl. Ceylon 16. 1824.—Weyhe & Nees von Esenbeck, Pl. Offic. 1. pl. 190. 1828.—Roxb. Fl. Ind. 1: 573. 1832.—Fingerh. Monogr. Gen. Capsici 12. t. 2. f. a. 1832.—Don, Hist. Dich. Pl. 4: 444. 1838.—Sendt. in Martius, Fl. Bras. 10: 147. 1846.—Hooker, Niger Fl. 472. 1849.—Dunal in DC. Prodr. 13¹: 412. 1852.—Miquel, Fl. Ned. Ind. 2: 657. 1856.—Drury, Useful Pl. Ind. 111. 1858.—Reichenb. Ic. Fl. Germ. 20. pl. 13. f. 2. 1862.—Miquel, Mus. Lugd.-Bat. 3: 117. 1867.—Hemsley, Biol. Cent.-Am. 2: 423. 1881-2.
- Capsicum Tournefortii* Bess. Cat. Hort. Crem. 27. 1811. Fide Index Kewensis.
- Capsicum annuum ovoideum* Fingerh. Monogr. Gen. Capsici 14. t. 2. f. e. 1832.—Dunal in DC. Prodr. 13¹: 412. 1852.
- Capsicum annuum subangulosum* Fingerh. Monogr. Gen. Capsici 13. t. 2. f. d. 1832.
- Capsicum annuum longicarpum* Don, Hist. Dich. Pl. 4: 445. 1838.
- Capsicum annuum longum* Sendt. in Martius, Fl. Bras. 10: 147. 1846.—Kuntze, Revis. Gen. Plant. 449. 1891. (As to races with refracted fruit.)
- Capsicum annuum erectum* Kuntze, Revis. Gen. Plant. 449. 1891.
- Siliquastrum majus et minus*. Fuch. Hist. Stirp. Basil. 731-732. f. 1542; Hist. Stirp. Lugd. 693. f. 1551.
- Capsicon rubeum & nigrum*. Fuch. Hist. Stirp. 425. f. 1545.
- Piper Indicum*, sive *Siliquastrum*. Pinaeus, Hist. Pl. Lugd. 12. 1561.
- Piper Indicum*. Matth. Comment. 23. f. 1560; 400. f. 1570. Compend. Pl. Omnib. 322. f. 1571. Matth. Opera 434. f. 1598.—Blackw. Herbarium 2. pl. 129. 1754.
- Capsicum*, *Piper Indicum*. Lobel, Pl. Stirp. Hist. Antv. 172. 1576.
- Capsicum oblongioribus siliquis*. Dodon. Stirp. Hist. Pempt. 704. f. 1583; 716. f. 1616.
- Siliquastrum*. Bassaeus, Eicones Pl. 859. f. 1590.—Tabern. Kreuterbuch 529. f. 1591; Volk. Kreuterbuch 2: 559. f. 1613.
- Capsicum Actuarij*, sive *Caninum Zinziber*. etc. Lobel. Icones Stirp. 316. 1591.
- Capsicum*. Clus. in Monard. Simplic. Med. 387. 1593.—Monardus in Clus. Exot. 340. f. 1605.
- Capsicum siliquis oblongis*. Bauhin. Phytopinax 155. 1596.
- Capsicum longioribus siliquis*. Gerarde, Herball 292. f. 1. 1597; 364. f. 1. 1636.
- Piper Americanum vulgatiore*. Greg. de Reg. in Clus. Cur. Post. 103. f. 1611.
- Piper oblongum recurvis siliquis*. Greg. de Reg. in Clus. Cur. Post. 101. f. 9. 1611.—Jonstonus, Dendrog. t. 56. 1662.—Raius, Hist. Pl. 1: 678. 1686.
- Piper Indicum longum maximum*. Hort. Eyst. 1613 [fide Morison, Pl. Hist. Oxon. 3: 529. 1699]; 1. Aut. Ord. 1: 6. f. 1. 1713.

- Solanum urens* siliqua propendente rubra. Morison, l. c. Sect. 13. t. 2. f. 2.
- Piper Indicum* propendentibus siliquis oblongis recurvis. Bauhin. Pinax 102. 1623.
- Piper Indicum* vulgatissimum. Bauhin. Pinax 102. 1623.—Morison, Hist. Pl. Oxon. 3: 528. 1699.
- Capsicum oblongum* minus recurvis siliquis. Parkinson, Theat. Bot. 357, f. 16, 358. 1640.—Sloane, Cat. Pl. Jamaic. 113. 1696.
- Capsicum majus* vulgatus oblongis siliquis. Parkinson, Theat. Bot. 355, 356. f. 1. 1640.—Magnol, Hort. Monsp. 41. 1697.
- Capsicum oblongum* majus recurvis siliquis. Parkinson, Theat. Bot. 357, f. 15, 358. 1640.
- Capsicum erectum* majus longum. Parkinson, Theat. Bot. 358. 1640.
- Figures without name, in Hernand. Nov. Hist. Pl. 1: 135-137. 1651.
- Piper Indicum* longiorib. siliquis rubr. Sweet. Florilegium 2: t. 35. f. 3. 1654.
- Piper longum* majus surrectum. Jonstonus, Dendrog. t. 56. 1662.
- Piper* vulgatissima. Jonstonus, Dendrog. t. 56. 1662.
- Capsicum Brasillianum* fructu oblongo. Munting, Waare Oeffen. 341. 1682.
- Solanum Capsicum dictum* siliquis surrectis & oblongis. Hermann. Hort. Acad. Lugd.-Bat. 576. 1687.
- Solanum Capsicum dictum* vulgatissimum. Hermann. Hort. Acad. Lugd.-Bat. 574. 1687.
- Capsicum* siliquis surrectis & oblongis. Magnol, Hort. Monsp. 42. 1697.
- Capsicum* sive *Piper Indicum* siliquis oblongis recurvis. Morison, Pl. Hist. Oxon. 3: 529. 1699.
- Capsicum* sive *Piper Indicum* siliquis surrectis & oblongis. Morison, Pl. Hist. Oxon. 3: 530. 1699.
- Capsicum* siliquis longis, propendentibus. Tournef. Inst. 152. 1700.—Tillus, Cat. Pl. Hort. Pisa. 30. 1723.—Miller, Gard. Dict. 1731 [no. 1].
- Piper Indicum* medium. Hort. Eyst. 1. Aut. Ord. 1: 7. 1713.
- Capsicum*; fructu oblongo, nunc erecto, nunc nutante, rubro. Miller, Gard. Dict. 1731 [no. 9].
- Capsicum*. *Piper indicum*. Blackw. Herbal 1. pl. 129. 1737.
- Solanum mordens* medium. Weinmann. Phyt. 4: 349. t. 927. f. e. 1745.

Plants quite erect, stalky, $1\frac{1}{2}$ - $2\frac{1}{2}$ ft. high, tree like. Stem green, sparingly hairy, stout. Branches few, large, quite erect, green, purplish at nodes, often purplish striate, sparsely pubescent. Leaves ovate acuminate, deep green, $2\frac{1}{2}$ -4 in. long, $1\frac{1}{2}$ - $2\frac{1}{2}$ in. wide, slightly hairy on midrib below; lower ones often pendent, sometimes involute and more or less wrinkled; upper ones smoother and more erect; petiole large, smooth, sometimes longer than blade.

Peduncles solitary, curved or straight either on the same or on different plants, $\frac{7}{8}$ – $1\frac{1}{8}$ in. long, stout, enlarging toward calyx end. Calyx usually pateriform or funnel-form, rarely embracing base of fruit except in the Ivory Tusk variety, though sometimes where the calyx is slightly larger than the base the fruit is obscurely inclosed by the margin of the calyx. Corolla large, dingy white, spreading $\frac{7}{8}$ – $1\frac{1}{4}$ in. Fruit 3–12 in. long (rarely more), $\frac{3}{4}$ – $1\frac{3}{4}$ in. diam., tapering; base flat or slightly depressed; flesh $\frac{1}{2}$ – $\frac{1}{6}$ in. thick, sometimes mild, sometimes extremely pungent.

The varieties differ from *C. annuum acuminatum* by the stems and branches being larger and more stalky; leaves larger, often pendent and involute; calyx pateriform or funnel form; fruit larger, and flesh thicker.

+ Corolla more or less blotched with purple; fruit at first nearly black, afterwards becoming orange-red.

BLACK NUBIAN*. Plant vigorous, 2–2½ ft. high, quite loosely spreading 2–3 ft. Stem and branches smooth, dark purple or purple striate. Leaves 2–3 in. long, $1\frac{3}{8}$ – $1\frac{1}{2}$

* Childs, Cat. 1892.—*Purple* or *Sore-throat*. Titford, Hort. Bot. 47. 1812.—*Purple* or *Blue Podded* syn. *Black Podded*. Burr, Field & Gard. Veg. 623. 1863.—*Purple Capsicum*. Vilmorin-And. Veg. Gard. 151. 1885 [Eng. ed. Robinson].—French, *Piment violet*, *Piment noir*.—German, *Schwarzer nubischer Pfeffer*.

Capsicum nigrum Willd. Enum. Hort. Reg. Berol. 1: 242. 1809.—Poiret, Enc. Meth. Suppl. 4: 414. 1816.

Capsicum purpureum Vahl ex Hornem. Hort. Hafn. 1: 224. 1813.—Roxb. Fl. Ind. 1: 573. 24 Dec. 1831.—Don, Hist. Dich. Pl. 4: 446. 1838.

Capsicum violaceum DC. Hort. Monsp. 87. 1813.—Kunth, Nov. Gen. Sp. Pl. 3: 49. 1818.—Fingerh. Monogr. Gen. Capsici 23. 1832.—Don, Hist. Dich. Pl. 4: 447. 1838.—Dunal in DC. Prodr. 13¹: 423. 1852.

Capsicum bicolor (Jacq.).—Bot. Mag. 43. t. 1835. 1816.—Linn. Sp. Pl. 4: 564. 1819 [ed. Röm. et Schult.].—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Fingerh. Monogr. Gen. Capsici 15. t. 3. f. a. 1832.—Don, Hist. Dich. Pl. 4: 446. 1838.—Dunal in DC. Prodr. 13¹: 413. 1852.—Seemann, Bot. Herald 401. 1852–57.—Miquel, Fl. Ned. Ind. 2: 660. 1856.

Capsicum Quitense Willd. Herb.—Linn. Syst. 4: 809. 1819 [ed. Röm. et Schult.]. Fide Index Kewensis.

in. wide, more or less blotched with purple especially along the veins, smooth, slightly puffed; petiole $\frac{1}{2}$ – $1\frac{1}{2}$ in. long. Peduncles straight or curved on same plant, $\frac{7}{8}$ – $1\frac{1}{8}$ in. long, quite slender. Corolla spreading $\frac{3}{4}$ – $\frac{7}{8}$ in., purple or purple striate along the margins of the petals. Ovary green at first but soon after the corolla drops becoming a dark glossy purple. Fruit upright, spreading, or pendent, on same plant, 2–4 in. long, $\frac{1}{2}$ – $\frac{5}{8}$ in. diam., tapering to a rounded or sometimes acute apex, smooth or somewhat irregularly curved, 1–2 celled; base usually narrowing into the calyx; flesh about $\frac{1}{2}$ in. thick, quite firm, extremely pungent; black or dark purple, ripening into a deep orange-red mottled with dingy brown spots.

+ Corolla white.

++ Calyx pateriform, usually not entirely covering the flat base of the fruit.

LONG RED.* Branches often quite prominently purple striate. Corolla spreading about $1\frac{1}{4}$ in. Fruit 4–7 in. long, $\frac{5}{8}$ – $1\frac{1}{8}$ in. diam., oblong conical, frequently more or less curved, with an acute, rounded or sometimes obscurely 2–3 lobed apex, smooth, sometimes obscurely furrowed

Capsicum bicolor purpureum Fingerh. Monogr. Gen. Capsici 16. 1832.—
Dunal in DC. Prodr. 13¹: 414. 1852.

Capsicum Hamiltonii Don, Hist. Dich. Pl. 4: 447. 1838.—Dunal in DC.
Prodr. 13¹: 429. 1852.

Capsicum longum violaceum Dunal in DC. Prodr. 13¹: 424. 1852.

Capsicum Narunca Hort. Matr. ex Dun. in DC. Prodr. 13¹: 414. 1852.
Fide Index Kewensis.

Capsicum siliquis longis, propendentibus, purpureis. Haller, Enum.
Hort. Gott. 215. 1753.

* Burr, Field & Gard. Veg. 622. 1863.—Vilmorin-And. Veg. Gard. 150.
1885 [Eng. ed. Robinson].—Bailey, Bull. Mich. Agr. Col. 31: 39. 1887.—
Coral Peppers. Titford, Hort. Bot. 1812.—French, *Piment rouge long*,
Piment rouge long ordinaire.—German, *Langer rother Pfeffer.*

Capsicum longum DC. Cat. Monsp. 86. 1813.—Linn. Syst. 4: 560. 1819
[ed. Röm et Schult.].—Hornem. Hort. Hafn. Suppl. 27. 1819.—
Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Miquel, Fl. Ind.
2: 658. 1856; Mus. Lugd.-Bat. 3: 117. 1867.

longitudinally, rarely subrugose, 2-celled; flesh $\frac{1}{16}$ – $\frac{1}{12}$ in. thick, usually quite pungent, sometimes mild.

A very old and universally cultivated variety, especially in European countries. Dr. Palmer speaks of the Mexican plant corresponding to this variety as very common in cultivation in that country, being the universal market variety which bears abundantly. Several cases were seen where plants were in quite a thrifty condition at three years of age. These plants were four feet high, presenting a clumsy appearance, with heavy branches hanging loosely about. The fruit on a single plant was variable in shape, straight or bent, smooth or wrinkled, slender or thickened.

COUNTY FAIR.* Fruit 4–6 in. long, $1\frac{1}{2}$ –2 in. diam. at the base, hornshaped, smooth, glossy, rounded at apex, often with obscure furrows extending a part or the entire length, terminating in a minutely lobed apex; flesh firm, about $\frac{1}{8}$ in. thick or more, mild and slightly juicy when ripe, somewhat pungent about the seeds, deep red.

This is one of the most productive of the long varieties, as well as the best in quality, and merits a high place where pungent properties are not desired. It was introduced about 1892.—Plate 14, f. 1.

++ ++ Calyx funnel form, usually entirely covering the base or sometimes obscurely embracing the fruit.

CARDINAL.† Plants not distinguishable from Long Red. Peduncles sometimes curved upwards, placing the fruit in an erect position. Fruit 4–7 in. long, $\frac{3}{4}$ – $1\frac{1}{4}$ in. diam., taper-

* Henderson, Cat. 1892.

Capsicum longum incrassatum Fingerh. Monogr. Gen. Capsici 24. t. 7. f. a. 1832.—Dunal in DC. Prodr. 13¹: 424. 1852.

Capsicum Americanum, fructu oblongo, dulce (Plum.) Tournef. Inst. 153. 1700.

Solanum mordens fructu propendente oblongo crasso. Weinmann. Phyt. 349. t. 927. f. c. 1745.

† Henderson, Cat. 1891.—*Red Cardinal*. Bailey, Bull. Mich. Ag. Col. 31: 40. 1887.

ing to a usually acute apex, usually curved and sometimes twisted, often obscurely furrowed; flesh about $\frac{1}{2}$ in. thick, slightly pungent; seeds extremely pungent. Introduced about 1890.— Plate 13, f. 1.

LONG YELLOW.* Fruit averages a little smaller than Long Red, otherwise the same except in color, which is a bright yellow, and in the calyx which is somewhat funnel form entirely covering or slightly embracing the base of the fruit. A very old variety.— Plate 12, f. 2.

* Burr, Field & Gard. Veg. 622. 1863.— Vilmorin-And. Veg. Gard. 151. 1885 [Eng. ed. Robinson].— *Long Yellow French*. Bailey, Bull. Mich. Agr. Col. 31: 38. 1887.— French, *Piment jaune long*.— German, *Langer gelber Pfeffer*.

Capsicum longum rectum Fingerh. Monogr. 25. t. 7. f. c.

Capsicum longum luteum Hort. Vilmorin-And. Fl. Pleine Terre 884. 1870 [3d ed.].

Piper Indicum propendentibus siliquis etc. diff. 3. Siliqua flava, vel aurea. Bauhin. Pinax 102. 1623.

Capsicum siliqua flava brevior. Parkinson, Theat. Bot. 357. f. 18. 1640.

Capsicum siliqua flava longior. Parkinson, Theat. Bot. 358. 1640.

Piper longum siliquis luteis. Jonstonus, Dendrog. t. 56. 1662.

Piper siliqua flava. Jonstonus, Dendrog. t. 56. 1662.

Capsicum siliquis flavis. Magnol, Hort. Reg. Monsp. 42. 1697.

Capsicum sive Piper Indicum siliqua flava vel aurea oblonga. Morison, Hist. Pl. Oxon. 3: 530. 1699.

Capsicum sive Piper Indicum siliqua flava lata. Morison, Hist. Pl. Oxon. 3: 530. 1699.

Capsicum fructu flavescente. Tournef. Inst. 152. 1700.— Tillus, Cat. Pl. Hort. Pisa. 30. 1723.— Boerhaave, Index Pl. Lugd.-Bat. 2: 68. 1727.

Piper Indicum Aureum latum. Hort. Eyst. 1. Aut. Ord. 1: 9. f. 2. 1713.

Piper Indicum Siliquis flavis. Hort. Eyst. 1. c. f. 1.

Capsicum; fructu flavo, pyramidato, oblongo, nunc erecto, nunc nutante, Miller, Gard. Dict. 1731 [no. 11].

Capsicum; siliqua lata; nervosa; longa; recurva lutea. Boerhaave, Index Pl. Lugd.-Bat. 2: 69. 1727.

Capsicum; siliqua propendente; aurea; incurva. Boerhaave, Index Pl. Lugd.-Bat. 2: 69. 1727.

Capsicum; siliquis recurvis; luteis. Boerhaave, Index Pl. Lugd.-Bat. 2: 68. 1727.

Solanum mordens fructu aureo lato. Weinmann. Phyto. 349. t. 928. f. b. 1745.

Solanum mordens siliquis flavis. Weinmann. Phyto. 349. t. 928. f. c. 1745.

++ ++ ++ Calyx usually seated in a basal depression.

ELEPHANT'S TRUNK.* Evidently a large form of *Cardinal*. Fruit 6–9 in. long, rarely about a foot, $2\frac{1}{2}$ – $3\frac{1}{2}$ in. diam., deeply furrowed and wrinkled, tapering gradually from the base to a prominently 3–4 lobed apex, often much curved and twisted, dark red; flesh somewhat pungent. Introduced about 1892.—Plate 13, f. 2.

PROCOPP'S GIANT.† Fruit 5–8 in. long, $1\frac{1}{4}$ – $2\frac{1}{2}$ in. diam. at base, very rugose and irregular in form; flesh quite thick (about $\frac{1}{2}$ in.), slightly pungent. Introduced about 1888.

Because of the many peculiar contortions it ordinarily assumes it is often considered a monstrosity.—Plate 14, f. 2, and plate 15, f. 1.

++ ++ ++ ++ Calyx usually cup-shaped and inclosing base of fruit.

IVORY TUSK.‡ Plant quite a rank grower. Peduncles slender. Fruit 3–6 in. long, $\frac{1}{2}$ – $\frac{3}{4}$ in. diam., pendent, straight or slightly curved, usually smooth at first, the ripe fruit often with few shallow longitudinal furrows, the glossy surface of the unripe fruit resembling a tusk, often of an ivory white sometimes tinged with green, finally becoming a deep red; flesh medium thin, moderately pungent. Introduced in 1894, and not yet very generally disseminated.—Plate 11, f. 2.

a Fruit oblate or oblong, truncated, deeply lobed, furrowed and wrinkled; flesh mild, $\frac{1}{2}$ – $\frac{3}{4}$ in. thick.

C. annuum grossum Sendt.

Capsicum grossum Linn. Mant. 47. 1767.—Thunb. Fl. Jap. 93. 1784.—Linn. Syst. 226. 1784 [ed. 14. Murray].—Aiton, Hort. Kew. 1: 254.

* Benary, Seed Cat. 1895.—French, *Trompe d' éléphant*.—German, *Elephanten-Rüssel*.

Capsicum annuum proboscideum. Haage & Schmidt, Gartenflora 41: 582, 583, f. 125. 1892.

† Benary, Seed Cat. 1894.—German, *Procopp's riesen Pfeffer*.

‡ Childs, Cat. 1894.

Capsicum ceratocarpum. Fingerh. Monogr. Gen. Capsici 22. t. 6. f. c. 1832.—Dunal in DC. Prodr. 13¹: 423. 1852.

- 1789.—Desfont. Fl. Atlant. 1: 196. 1789-1800.—Linn. Sp. Pl. 1: 1051. 1797 [ed. Willd.].—Miller, Gard. Dict. 1797 [ed. Martyn].—Lam. Enc. Meth. 2: 26. 1793 [no. 2389].—Poiret, Enc. Meth. 5: 326. 1804.—Persoon, Syn. Pl. 1: 230. 1805.—Hornem. Hort. Hafn. 1: 223. 1813.—Linn. Syst. 4: 562. 1819 [ed. Röm. et Schult.].—Moon, Cat. Pl. Cey. 16. 1824.—Fingerh. Monogr. Gen. Capsici 21. t. 5-6. 1832.—Roxb. Fl. Ind. 1: 574. 1832.—Nees von Esenb. Trans. Linn. Soc. 17: 162. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 422. 1852.—Miquel, Fl. Ned. Ind. 2: 659. 1856.—Hooker, Fl. Brit. Ind. 4: 239. 1885.
- Capsicum angulosum* Miller, Gard. Dict. 1771 [no. 4. 6th ed.].—Linn. Syst. 4: 561. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. Gen. Capsici 27. t. 8. f. a. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 426. 1852.
- Capsicum annuum angulosum* Miller, Gard. Dict. 1797 [ed. Martyn].
- Capsicum silvestre* Vell. Fl. Flum. Repr. in Rio de Jan. Archiv. Mus. Nac. 5: 58. 1881.
- Capsicum annuum rugulosum* Fingerh. Monogr. 13. t. 2. f. b. 1832.
- Capsicum angulosum ovale* Fingerh. Monogr. 28. t. 8. f. b. 1832.—Dunal in DC. Prodr. 13¹: 426. 1852.
- Capsicum angulosum conicum* Fingerh. Monogr. 28. 1832.—Dunal in DC. Prodr. 13¹: 426. 1852.
- Capsicum grossum pomiferum* Fingerh. Monogr. Gen. Capsici 22. t. 5. f. c. 1832.—Don, Hist. Dich. Pl. 4: 446. 1838.—Dunal in DC. Prodr. 13¹: 423. 1852.
- Capsicum grossum ovatum* Fingerh. Monogr. Gen. Capsici 22. t. 5. f. d. 1832.—Dunal in DC. Prodr. 13¹: 423. 1852.
- Capsicum grossum cordatum* Fingerh. Monogr. Gen. Capsici 22. t. 6. f. a. 1832.—Nees von Esenb. Trans. Linn. Soc. 17: 63. 1832.
- Capsicum grossum angulosum* Fingerh. Monogr. Gen. Capsici 22. t. 6. f. b. 1832.—Dunal in DC. Prodr. 13¹: 423. 1852.
- Capsicum Chamaecerasus* Nees von Esenb. Trans. Linn. Soc. 17: 65. 1832.
- Capsicum grossum globosum* Don, Hist. Dich. Pl. 4: 446. 1838.
- Capsicum grossum bifidum* Don, Hist. Dich. Pl. 4: 446. 1838.
- Capsicum pomiferum* Steud. Nom. 1: 279. 1840 [ed. 2].
- Capsicum annuum grossum* Sendt. in Martius, Fl. Bras. 10: 147. 1846.—Kuntze, Revis. Gen. Plant. 449. 1891.
- Capsicum annuum rugosum* Dunal in DC. Prodr. 13¹: 412. 1852.
- Capsicum angulosum macrocarpum* Dunal in DC. Prodr. 13¹: 426. 1852.
- Capsicum Axi* (Blume). Vell. Fl. Flum. Repr. in Rio de Jan. Arch. Mus. Nac. 5: 59. 1881.—Dunal in DC. Prodr. 13¹: 428. 1852.
- Siliquastrum quartum*. Fuch. Hist. Stirp. Basil. 734. f. 1542.
- Capsicon latum*. Fuch. Hist. Stirp. Basil. 427. f. 1545.
- Siliquastrum latum*. Fuch. Hist. Stirp. Lugd. 694. f. 1551.
- Capsicum latum*. Dodon. Post. Trium. Ant. 183. f. 1554.
- Capsicum latis siliquis*. Dodon. Hist. Stirp. Pempt. 705. f. 1583; 717. f. 1616.

- Piperis Indici* varietas. Matth. Opera 434. *f.* 1598; 434. *f.* 1674.
- Piper* cum siliqua lata ac rugosa. Greg. de Reg. in Clus. Cur. Post. 99-100. *f.* 8. 1611.—Jonstonus, Dendrog. *t.* 56. 1662.—Raius, Hist. Pl. 1: 678. 1686.
- Capsicum* siliqua lata & rugosa. Parkinson, Theat. Bot. 357-358. *f.* 3. 1640.
- Capsicum* bifurcata siliqua. Parkinson, Theat. Bot. 358. 1640.
- Capsicum* siliqua latiore & rotundiore. Bauhin. Hist. Pl. 2: 943. *f.* 1651.—Tournef. Inst. 152. 1700.—Boerhaave, Index. Pl. 2: 69. 1727.—Miller, Gard. Dict. 1771 [ed. 6].
- Piper* *Capsicum* siliqua latiore & rotundiore. Chabreaus, Omn. Stirp. Sciag. 297. *f.* 1677.
- Capsicum* seu *Piper* Indicum siliqua longa ampliore & dulciore Mexicanum. Morison, Pl. Hist. Oxon. 3: 529. 1699.
- Capsicum* sive *Piper* Indicum longum ventre tumido, siliqua per summum tetragona. Morison, Pl. Hist. Oxon. 3: 529. 1699.
- Capsicum* sive *Piper* Indicum maximum obtusum. Morison, Pl. Hist. Oxon. 3: 530. 1699.
- Capsicum* fructu longo, ventre tumido, per summum tetragono. Tournef. Inst. 152. 1700.
- Capsicum* fructu bifido. Tournef. Inst. 152. 1700.—Tillus, Cat. Pl. Pisa. 30. 1723.—Boerhaave, Index Pl. 2: 69. 1727.
- Capsicum* fructu tereti, oblongo, latifolium. Tillus, Cat. Pl. Pisa. 30. 1723.
- Capsicum*; siliqua lata nervosa; rubra. Boerhaave, Index Pl. 2: 69. 1727.
- Capsicum*; Africanum, fructu pyramidalis pendulo rugosissimo. Miller, Gard. Dict. 1731 [no. 4].
- Capsicum*; fructu maximo, oblongo rugoso plerumque nutante rubro. Miller, Gard. Dict. 1731 [no. 18].
- Solanum* mordens bifurcata siliqua. Weinmann. Phyt. 349. *t.* 228. *f.* a. 1745.
- Turbilo-Pepper, Hughes, Hist. Barb. 213. 1750. Fide Maycock, Fl. Barb. 104. 1830.

Plants herbaceous, $1\frac{1}{2}$ –2 ft. high. Branches green, often warty, glabrous, much enlarged at the nodes. Nodes slightly blotched with purple, subhairy. Leaves thick, dark green, often glossy on the upper surface, ovate, acuminate or sometimes obtuse; lower ones very large, usually 3–5 in. long, $2\frac{1}{4}$ – $3\frac{1}{2}$ in. wide, usually pendent, more or less wrinkled, often slightly involute; veins prominent, rarely subpilose on the under surface; petioles 2–3 in. long, stout, deeply channeled: upper ones smaller, quite erect, rarely wrinkled or involute. Peduncles stout, $\frac{3}{4}$ –1 in. long,

often swollen at the base, abruptly narrowing just above, gradually enlarging toward the calyx end. Corolla large, spreading $\frac{1}{2}$ – $1\frac{1}{4}$ in., coarse, dingy white. Fruit large, oblate, oblong, or truncated, deeply 3–4 lobed, usually with a basal depression, more or less sulcate and rugose, 3–4 celled; flesh $\frac{1}{2}$ – $\frac{3}{4}$ in. thick, firm, and of a mild flavor.

↔ Fruit pendent, not usually oblate.

= Fruit subconical, usually tapering to a narrow obscurely lobed or sometimes rounded apex.

EMPEROR.* Plants about 2 ft. high, vigorous. Fruit 3–5 in. long, $1\frac{1}{2}$ – $2\frac{1}{2}$ in. diam.,† tapering toward the apex, giving a broadly conical form, slightly furrowed; apex rounding or obscurely lobed; flesh medium thick, slightly pungent.

= = Fruit subconical or prismatic, slightly tapering to a 3 to 4 lobed apex, decidedly longer than broad.

MONSTROUS.‡ Plants 2– $2\frac{1}{2}$ ft. high, vigorous, much branched and with a dense foliage. Peduncles curved or rarely straight. Fruit 3–6 in. long, $1\frac{1}{2}$ – $2\frac{1}{2}$ in. diam., cylindro-conical, 3–5 shallow furrows extending the entire length, often transversely sulcate and very rugose, 3–5 lobed, 2–3 celled; flesh $\frac{1}{2}$ in. thick, slightly pungent, dark red. A late but prolific variety, originated in France and introduced to notice in this country about 1867. — Plate 16.

* *Giant Emperor*. Thorburn, Cat. 1883.— Bailey, Bull. Mich. Agr. Col. 31: 40. 1887.

† Henderson, Cat. 1883, and Thorburn, Cat. 1884, give the size of the fruit as 3 by $1\frac{1}{4}$ in., which is evidently a mistake.

‡ Vilmorin-And. Veg. Gard. 153. 1885 [Eng. ed. Robinson].— *Monstrous*, or *Grossum*. Henderson, Cat. 1876.— *Spanish Monstrous*. Thorburn, Cat. 1884.— *Monstrosum*. Burr, Cat. 1886.— *Crimson Queen*. Tillinghast, Cat. according to Dr. Sturtevant.— French, *Piment monstrueux*.— German, *Sehr grosser milder monströser Pfeffer*.

Capsicum grossum monstrosum Hort. Vilmorin-And. Fl. Pleine Terre 884. 1870 [3d ed.].

SWEET SPANISH.* Evidently only a form of Monstrous. Fruit 4–6 in. long, 2–3 in. diam., but slightly tapering toward the apex, usually with three or four furrows extending from the base to the apex, giving a uniformly prismatic shape with rounded angles.— Plate 17.

YELLOW SPANISH.† Identical with the preceding except that the fruit is of a bright yellow color.

— — — Fruit squarish, subtruncate, slightly longer than broad, sometimes very oblate; apical end often much contorted.

BELL.‡ Plant like the Monstrous. Fruit 2–3 in. long, $1\frac{1}{2}$ – $2\frac{1}{4}$ in. diam., subtruncate, 3–4 prominent furrows extending the entire length, often with one or more secondary furrows between the prominent ones near the base which vanish toward the apex, often lobed about a central nipple and sometimes much contorted at the apex, 3–4 celled; flesh $\frac{1}{8}$ – $\frac{1}{6}$ in. thick, slightly pungent. The fruit appears exceptionally subject to great variation, and very oblate forms often appear which are almost identical with the Squash pepper. Professor Bailey§ has recorded a variation toward the Cayenne type. The oblate form of Bell may usually be recognized by a slight projection at the apical end, while in the Squash variety this character is usually wanting.— Plate 18, and plate 19, f. 1.

* Burr, Field and Gard. Veg. 625. 1863.— *Quince-Pepper*. Burr, l. c. 623.— *Large Sweet Spanish*. Landreth, Cat. 1881.— *Spanish Mammoth*. Vilmorin-And. Veg. Gard. 153. 1885 [Eng. ed. Robinson].— *New Sweet Spanish*. Henderson, Cat. 1887.— French, *Piment doux d'Espagne*.— German, *Rother milder spanischer Pfeffer*.

† This name is given to the yellow form of *Spanish Mammoth*, according to Vilmorin-And. Veg. Gard. l. c.

‡ Burr, Field & Gard. Veg. 617. 1863.— *Red Prince*. Everitt, Cat. 1887.— *Bell*, or *Bull Nose*. Hend. Gard. for Profit 264. 1887 [3d ed.].— *Sweet Spanish*. Bailey, Bull. Mich. Agr. Col. 31: 41. 1887.— *Bull Nose*. Landreth, Cat. 1894.— French, *Piment gros carré doux*, *Piment cloche*.

§ Bull, Mich. Agr. Col. 31: 37. 1887.

≡≡ Fruit squarish, subtruncate, slightly longer than broad, neither oblate nor with apex contorted.

SWEET MOUNTAIN.* Plants 1½–2 ft. high. Branches comparatively few. Fruit 3–4 in. long, 2–3 in. diam., not tapering toward the apex, 3–4 shallow furrows extending the entire length, usually uniformly 3-lobed; flesh mild. Originated about 1865.

This variety is sometimes considered a synonym of Bell but the uniformly smaller plants and larger and milder fruits, which are not as subject to great variation, make it quite distinct, though at most it is but a subvariety or improved form.—Plate 19, f. 2, and plate 20.

GOLDEN DAWN.† Not usually distinguishable from the last except that the fruit is of a beautiful golden yellow color. It often varies to subconical without increasing in length. Introduced about 1882.—Plate 21, f. 2.

≡≡≡ Fruit squarish, subtruncate, longer than broad, usually slightly tapering.

RUBY KING.‡ Plant not distinguishable from Sweet Mountain. Fruit 4–7 in. long, 2–4 in. diam., deeply 4–5 furrowed and lobed, usually slightly tapering toward the apex; flesh slightly pungent. A very large form of Bell. Introduced about 1884.—Plate 21, f. 1.

GOLDEN KING § is said to have originated as a sport

* Burr, Field & Gard. Veg. 625. 1863.—Bailey, Bull. Mich. Agr. Col. 31: 41. 1887.—*Sweet Mountain*, or *Mammoth*. Hend. Gard. for Profit 264. 1886.—French, *Piment carré doux d'Amérique*.—German, *Eckiger dicker kurzer rother süsser Pfeffer*.

† Thorburn, Cat. 1883.—Hend. Gard. for Profit 265. 1886 [3d ed.].—*Golden Dawn Mango*. Sibley, Cat. 1884.—*Yellow Bell*. Bailey, Bull. Mich. Agr. Col. 31: 41. 1887.—*Yellow Nocre*. Notes and figures by Dr. Sturtevant, seed from Batchelor, 1887.—*Sweet Golden Dawn*. Thorburn, Cat. 1887.—*Golden Mango*. Seed from Childs, 1892.—French, *Piment carré jaune hatif*.

‡ Hend. Gard. for Profit 265. 1886 [3d ed.].—*New Large Scarlet*. Batchelor, seed, 1887.

§ Burpee, Cat. 1894.—*Mammoth Golden Queen*. Storrs & Harrison, Cat. 1882.—*Orange Mammoth*. Livingston, seed, 1887.—French, *Piment mammoth jaune d'or*.

from Ruby King about 1886. The fruit appears to be a little shorter in proportion to the diameter than Ruby King, otherwise the same except that the color is a bright golden yellow. Introduced about 1893.—Plate 22, f. 1.

++ ++ Fruit erect, not usually oblate.

BRAZILIAN UPRIGHT.* Plant about 2 ft. high, foliage rather dense. Leaves 3–5 in. long, ovate acuminate to ovate obtuse. Penduncles 1–1½ in. long, comparatively slender, sometimes slightly bent under weight of fruit. Fruit 2–5 in. long, 1½–2½ in. diam., prismatic, subconic or subtruncate, irregularly rugose, rarely nearly smooth, in general 2–3 lobed at apex, 2–3 deep furrows at base becoming obscure or lost at the middle; base usually depressed; flesh firm, about ⅓ in. thick, mild; seeds acrid. Introduced about 1890.—Plate 23.

GOLDEN UPRIGHT.† About 1½ ft. high, with few large stout branches. Leaves dark green, few. Fruit yellow, 3–4 in. long, 2–3 in. diam., subtruncate, deeply 3–4 lobed, flat or slightly depressed at base, 3–4 shallow sinuses radiating from the calyx, vanishing toward the middle, reappearing

* *New Brazilian Sweet Upright.* Thorburn, Cat. 1892.

Piper rotundum majus surrectum. Greg. de Reg. in Clus. Cur. Post. 96–97. f. 1. 1611.—Raius, Hist. Pl. 1: 677. 1686.

Piper Indicum siliquis surrectis rotundis, diff. 1. maximum obtusum. Bauhin. Pinax 103. 1623.

Piper Indicum siliquis surrectis & oblongis, diff. 4. siliqua bifurcata. Bauhin. Pinax 103. 1623.

Capsicum rotundum majus surrectum. Parkinson, Theat. Bot. 356–357. f. 3. 1640.

Capsicum sive Piper Indicum siliqua bifurcata. Morison, Pl. Hist. Oxon. 3: 530. 1699.

Piper Indicum bifurcata siliqua. Hort. Eyst. 1. Autum. Ord. 1: 8. f. 2. 1713.

Piper Indicum maximum rotundum erectum. Hort. Eyst. 1. Autum. Ord. 1: 11. f. 1. 1713.

Capsicum Africanum; fructu pyramidale rugosissimo plerumque erecto. Miller, Gard. Dict. 1731 [no. 5].

† Burpee, Cat. 1883.—*Golden Upright Sweet Mango.* Benary, Cat. 1893–4.—*Yellow Nocre.* Benary, Cat. 1893–4.

and becoming deeper toward apex, usually 1-2 obscure sinuses between larger ones, subrugose, 3-4 celled; flesh firm and sweet; seeds slightly acid. The fruit has a tendency to elongate, becoming subconical, often nipped at the apex and sometimes obscurely furrowed. Introduced 1887.—Plate 22, f. 2.

++ ++ ++ Fruit pendent, very oblate.

SQUASH.* Plant 1-2 ft. high with few stout, quite erect branches. Peduncles 1-1½ in. long, stout, much enlarged toward calyx end. Fruit truncate, very oblate, 1-2 in. long, 2-3 in. diam., usually with three or more deep furrows extending from base to or near the apex and numerous obscure ones about half as long, 2-3 celled; flesh firm, ½-¾ in. thick, rather insipid, slightly pungent, often with a trace of tomato flavor. This is a very late variety and not an abundant bearer. The fruit is excellent for mangoes.—Plate 24, and plate 25, f. 1.

* Burr, Field & Gard. 624. 1863.—Bailey, Bull. Mich. Agr. Col. 31: 41. 1887.—*Red Tomato Capsicum* or *American Bonnet Pepper*. Vilmorin-And. Veg. Gard. 154. 1885 [Eng. ed. Robinson].—*Squash* or *Tomato-Shaped*. Hend. Gard. for Profit 265. 1886 [3d ed.].—*Red Tomato*. Bailey, Bull. Mich. Agr. Col. 31: 41. 1887.—*New Dwarf Early Red Squash*. Burpee, Cat. 1893.—French, *Piment tomate*, *Piment tomate nain hatif*.—German, *Liebesapfelsfrüchtiger rother Pfeffer*.

Capsicum tetragonum Miller, Gard. Dict. 1771 [no. 3. ed. 6].—Linn. Syst. 4: 561. 1819 [ed. Röm. et Schult.].—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Fingerh. Monogr. Gen. Capsici 30. t. 10. f. d. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Miquel, Fl. Ned. Ind. 2: 658. 1856.

Capsicum annuum tetragonum Miller, Gard. Dict. 1797 [ed. Martyn].

Capsicum cydoniaeforme Hort. Linn. Syst. 4: 561. 1819 [ed. Röm. et Schult.].

Capsicum tomatiforme Fingerh. in Steud. Nom. 279. 1840 [2d ed.].

Capsicum dulce Hort. Dunal in DC. Prodr. 13: 428. 1852.

Capsicum grossum lycopersicoides Vilmorin-And. Fl. Pleine Terre 884. 1870 [3d ed.].

Piper Indicum fructu dependente Pomi amoris formæ. Bauhin. Pinax 102. 1623.—Raius, Hist. Pl. 1: 678. 1686.

Solanum mordens seu *Capsicum latifolium* mall Aethiopici, etc. Plukenetius, Phyto. 1. t. 227. f. 1. 1692.

YELLOW SQUASH.* Identical with the preceding except that the fruit is of a bright yellow color.

a a Fruit subconical, ovate or elliptical, slightly longer than broad, $\frac{3}{4}$ –2 in. long; calyx not embracing base.

C. annuum abbreviatum Fingerh.

Capsicum annuum abbreviatum Fingerh. Monogr. 14. t. 2. f. 1.

Plants suffrutescent, 1–2 ft. high. Branches numerous, erect or in some varieties loosely spreading, deep green, smooth, slender, distinctly angled, sometimes sulcate. Leaves broadly ovate, 2–4 in. long, $1\frac{1}{4}$ – $2\frac{3}{4}$ in. wide, minutely ciliate, usually deep green above, much paler below, extending slightly into the petiole, often puffed, sometimes smooth and glossy. Peduncles 1– $1\frac{1}{2}$ in. long, about as long as or longer than the fruit, rarely in twos, medium slender, straight or curved in different varieties, smooth, or on younger specimens subhairy. Calyx seated on the base of the fruit. Corolla medium, spreading about $\frac{3}{4}$ in., dingy white. Fruit $\frac{3}{4}$ –2 in. long, varying much with different varieties, in general ovate, usually more or less rugose except in the Etna variety, sometimes turbinate, red or yellow when ripe, often variously blotched with brown or light yellow before ripening.

Capsicum sive *Piper Indicum latifolium* Mali Aethiopici fructu magnostriato. Morison, Hist. Pl. Oxon. 3: 529. 1699.

Capsicum seu *Piper Indicum Pomi amoris* forma. Morison, Hist. Pl. Oxon. 3: 529. 1699.

Capsicum fructu rotundo, maximo. Tournef. 153. 1700.—Tillus, Pisa. 30. 1723.

Piper Indicum rotundum maximum. Hort. Eyst. 1. Autum. Ord. 1: 10. f. 1. 1713.

Capsicum; *latifolium*; *Mali Aethiopici* etc. Boerhaave, Index Pl. Lugd.-Bat. 2: 69. 1727.

Solanum seu *Piper Indicum maximum*. Weinmann. Phyt. 4: 349. t. 928. f. d. 1745.

* Burr, Field & Gard. Veg. 626. 1863.—French, *Piment tomate jaune*.—German, *Liebesapfel fruchtiger gelber Pfeffer*.

Capsicum grossum lycopersicoides luteum Hort. Vilmorin-And. Fl. Pleine Terre 884. 1870 [3d ed.].

* Fruit erect.

+ Light yellow or straw-color before ripening.

CELESTIAL.* Plants very erect, about $1\frac{1}{2}$ ft. high, conical in form, rather compact, moderately branchy. Leaves rather lighter green and smaller than in other varieties of this group; petioles slender. Peduncles $1-1\frac{1}{4}$ in. long, straight, slender, stout, scarcely enlarging toward the calyx end. Fruit erect, $1\frac{1}{4}-2\frac{1}{2}$ in. long, $1-1\frac{1}{4}$ in. diam., ovate, subconical, or subpyramidal, rarely much elongated, smooth, or obscurely wrinkled; apex acute, rounded, or sometimes obscurely lobed; base flat, usually not entirely covered by the calyx; unripe of a greenish yellow or dingy white often with numerous purplish brown spots, later becoming more yellow or straw color, finally a bright red, 2-3 celled; flesh moderately firm, $\frac{1}{12}-\frac{1}{8}$ in. thick, extremely pungent. Introduced about 1887, having been brought from China some years before.

The fruit begins setting early, lasting nearly all summer. The lower ones ripening one or two weeks earlier than the others and borne, as most of them are, in large numbers beyond the leaves, the various colors on the same plant present an unusually novel appearance, making it especially desirable as a pot plant.—Plate 25, f. 2 and plate 26, f. 1.

+ + Neither light yellow, nor straw-color.

ETNA.† Plants about $1\frac{1}{2}$ ft. high. Branches numerous, quite diffusely spreading. Leaves medium, $1\frac{1}{2}-3$

* Thorburn, Cat. 1888.—*Childs' Improved Celestial*. Childs, Cat. 1894.—French, *Piment chinois*.

Capsicum leucocarpum Dunal in DC. Prodr. 18¹: 429. 1852.

Capsicum; *Americanum*, *latifolium*, *fructu oblongo, erecto, candido*. Miller, Gard. Dict. 1731 [no. 17].—Fingerh. Monogr. 32. 1832.

† *Red Etna*. Burpee, Cat. 1893.

Piper oblongum erectum majus pyramidale. Greg. de Reg. in Clus. Cur. Post. 97-98. f. 2. 1611.—Raius, Hist. Pl. 1: 677. 1686.

Piper erectum minus pyramidale. Greg. de Reg. in Clus. Cur. Post. 97-98. f. 3. 1611.—Raius, Hist. Pl. 1: 677. 1686.

in. long, $1-1\frac{1}{4}$ in. wide. Fruit 1-2 in. long, $\frac{5}{8}-1\frac{1}{4}$ in. diam., at first ovate or subconical, often becoming subtruncate and obscurely 2, 3, or rarely 4 lobed with the same number of shallow furrows, dark red; flesh about $\frac{1}{2}$ in. thick, slightly pungent. Only moderately productive. Introduced in 1890.—Plate 27, f. 2.

* * Fruit pendent.

+ Changing from green to light yellow or straw-color before ripening.

KALEIDOSCOPE.* Plants vigorous, about 2 ft. high, spreading $2\frac{1}{2}$ -3 ft. Branches long, slender, loosely spreading. Leaves medium large for the group, often smooth, glossy, and thick; petioles sometimes longer than the blade. Peduncles slender, obscurely canaliculate, curved. Fruit nodding or pendent, $1-1\frac{1}{4}$ in. long, $\frac{3}{4}-1$ in. diam., oval or elliptical, abruptly narrowing toward both ends, usually mucronate, often with a rigid bristly projection at the apex, subrugose, numerous shallow furrows extending a part or the entire length, changing in color from green to yellowish green, and yellowish red, finally a bright red; flesh about $\frac{1}{8}$ in. thick, moderately firm, mild. Introduced 1890. Valuable mainly as an ornamental.—Plate 25, f. 3, and plate 26, f. 2.

Capsicum erectum pyramidale majus. Parkinson, Theat. Bot. 356. f. 1640.

Capsicum erectum pyramidale minus. Parkinson, Theat. Bot. 357. f. 1640.

* Childs, Cat. 1891.—German, *Kaleidoscop*.

Piper Indicum fructu aculeato. Bauhin. Pinax 102. 1623.—Raius, Hist. Pl. 1: 678. 1686.

Capsicum sive Piper Indicum fructu aculeato majus. Morison, Hist. Pl. Oxon. 3: 529. 1699.

Solanum urens fructu aculeato. Morison, Hist. Pl. Oxon. Sect. 13. t. 2. f. 16. 1699.

Capsicum fructu aculeato, minori. Tournef. Inst. 153. 1700.—Tillus, Cat. Pl. Pisa. 30. 1723.

Capsicum fructu aculeato, majori. Tournef. l. c.

Piper Indicum rotundum aculeatum. Hort. Eyst. 1. Aut. Ord. 1: 12 f. 1. 1713.

Piper Indicum orbiculatum medium. Hort. Eyst. l. c. f. 2.

+ + Not changing from green to light yellow.

↔ Usually more or less turbinate.

RED WRINKLED.* Plants 1–2 ft. high, often spreading 2–3 ft. Branches often purple striate. Leaves 2–3½ in. long, 1¼–2 in. wide; petioles 1–1¼ in. long. Peduncles curved, usually ¾–1 in. long, slender, slightly enlarged toward calyx end. Corolla greenish white, spreading ½–¾ in. Fruit very rugose, about 1 in. long, ¾–1 in. diam., pendent or nodding, usually turbinate, with projecting nipples, bright red when ripe.—Plate 27, f. 3.

YELLOW WRINKLED.† Identical with the preceding except that the fruit is of a bright yellow color.

↔ ↔ Not usually turbinate.

PRINCESS OF WALES.‡—Plants 1–1½ ft. high, quite erect, branches numerous, slender, stiff, puberulent, scarcely more hairy at the nodes, leaves often puffed or wrinkled, 2–3½ in. long, 1½–2 in. wide, pubescent on veins below, ciliate; petioles medium short. Peduncles usually curved, slender, smooth. Corolla greenish white, usually spreading about ¾ in. Fruit conical to ovate-elliptical, 1–1½ in. long, ¾–1 in. diam., more or less sulcate, rarely turbinate, at first dark green, becoming blotched with purple, finally

* *Thorburn's Fancy Red Wrinkled*. Thorburn, Cat. 1892.—German, *Runziger rother Pfeffer*.

Capsicum umbilicatum Vell. Fl. Flum. Repr. in Rio de Jan. Arch. Mus. Nac. 5: 60. 1881.—Dunal in DC. Prodr. 13¹: 428. 1852.—Sturt. Bull. Torr. Bot. Club 15: 108. 1888.

† Thorburn, Cat. 1892.—German, *Runziger gelber Pfeffer*.

‡ Williams, Cat. 1878.

Capsicum luteum Lam. Enc. Meth. 2: 26. 1793 [no. 2392].—Poiret, Enc. Meth. 5: 327. 1804.—Linn. Syst. 4: 462. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. 26. t. 8. f. c. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 425. 1852.

Piper siliqua flava. Greg. de Reg. in Clus. Cur. Post. 102. f. 12. 1611.—Raius, Hist. Pl. 1: 678. 1686.

Solanum mordens seu *Capsicum fructu flavescente*. Weinmann. 349. t. 930. f. a. 1745.

a lemon yellow, usually 4-celled, extremely pungent. An ornamental English variety which originated about 1876 and is said to be the result of a cross between Prince of Wales and Yellow Gem, possessing the habit of the former and fruit of the latter. Not very generally catalogued by American seedsmen.

aaa Fruit generally smooth, oval, spherical, cherry or heart shaped, $\frac{3}{8}$ – $1\frac{1}{2}$ in. in diameter; calyx seated on the base.

C. annuum cerasiforme (Miller).

Capsicum Olivaeforme Miller, Gard. Dict. 1771 [no. 6. ed. 6].

Capsicum ovatum DC. Cat. Hort. Monsp. 86. 1813.—Poirot, Enc. Meth. Suppl. 4: 414. 1816.—Linn. Syst. 4: 561. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. 28. t. 2. f. b. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 426. 1852.

Capsicum oxycarpum Dunal in DC. Prodr. 13¹: 426. 1852.

Piper cum siliqua olivaria. Greg. de Reg. in Clus. Cur. Post. 99–100. f. 6. 1611.—Jonstonus, Dendrog. t. 56. 1662.—Raius, Hist. Pl. Oxon. 1: 677. 1686.

Piper Indicum propendentibus siliquis rotundis, diff. 3. siliqua olivari. Bauhin. Pinax 102. 1623.

Capsicum siliqua Olivaria propendens. Parkinson, Theat. Bot. 357. f. 10. 1640.—Morison, Hist. Pl. Oxon. 3: 529. 1640.

Capsicum siliqua Olivaria erecta. Parkinson, Theat. Bot. 357. 1640.

Solanum urens siliqua propendente, etc. Morison, Hist. Pl. Oxon. Sect. 13. t. 2. f. 12. 1699.

Capsicum sive Piper Indicum perenne siliqua Olivae magnitudine & forma. Morison, Hist. Pl. Oxon. 3: 530. 1699.

Capsicum siliqua Olivae forma. Tournef. Inst. 153. 1700.

Capsicum; fructu Olivario erecto. Miller, Gard. Dict. 1731 [no. 13].

Plants suffrutescent, 1–2 ft. high, spreading 2–2½ ft., with rather dense foliage. Branches numerous, quite uniformly 4-angled, green or purplish striate, purple and much enlarged at nodes. Leaves ovate or oblong acuminate, 1¼–3½ in. long, ½–1½ in. wide, flat, usually slightly wrinkled, margins usually subciliate; petioles medium slender, ½–1 in. long. Peduncles curved or straight on different plants or often on the same plant, ¾–½ in. long, stout, much enlarged toward calyx end, solitary, sometimes in twos. Calyx somewhat wrinkled, seated on base of fruit. Corolla large, dingy white, spreading ⅞–1⅓ in. Fruit spherical, subcordate,

oblate, or occasionally obscurely pointed or slightly elongated, erect, spreading, or pendent, $\frac{1}{2}$ –1 in. diam., smooth or very rarely minutely rugose or sulcate, when unripe often more or less blotched with purple on side next the sun; flesh firm, $\frac{1}{12}$ – $\frac{1}{8}$ in. thick, extremely pungent.

* Fruit $\frac{3}{4}$ – $\frac{1}{2}$ in. in diameter, oval or lemon-shaped.

LITTLE GEM.* Plant about $1\frac{1}{2}$ ft. high. Leaves medium small, larger ones 2 in. long by 1 in. wide; petioles rather short. Peduncles straight or slightly curved. Corolla obscurely greenish white, spreading about $\frac{5}{8}$ in. Fruit globular, ovate, or elliptical, about $\frac{3}{8}$ in. diam., usually erect, smooth, red, usually 3-celled, extremely pungent. Introduced in England about 1881. Not generally catalogued by American seedsmen.

PRINCE OF WALES.† Plant stout, upright-spreading, 12–15 in. high. Leaves 2–2 $\frac{1}{2}$ in. long, 1–1 $\frac{1}{2}$ in. wide. Peduncles curved, long and slender. Fruit small, about $\frac{1}{2}$ in. diam., lemon-shaped, bright yellow. A very old and prolific variety formerly much cultivated in Europe as an ornamental plant.

** Fruit $\frac{1}{2}$ –1 in. in diameter, generally cherry-shaped.

CHERRY.‡ Plant 2–2 $\frac{1}{2}$ ft. high, quite woody and very branchy. Fruit $\frac{3}{4}$ –1 in. diam. quite uniformly spherical or cherry-shaped, smooth, sometimes obscurely furrowed; flesh firm, about $\frac{1}{8}$ in. thick, extremely pungent, dark red.

* Floral Magazine *pl.* 479. 1881.—Williams' *Little Gem*. Williams, Cat. 1882.—*Miniature Tom Thumb*. Batchelor, seed, 1887.—*Creole or Bird's Eye*. Thorburn, Cat. 1893.

† Veitch, Cat. 1872.—German, *Prinz von Wales Pfeffer*.

Capsicum sive Piper Indicum sillqua flava ovali. Morison, Hist. Pl. 3: 530. 1699.

‡ Burr, Field and Gard. Veg. 620. 1863.—Vilmorin-And. Veg. Gard. 152. 1885 [Eng. ed. Robinson].—*Round or Large Cherry-Pepper*. Burr, l. c. 624.—*Cranberry*. Hend. Gard for Profit 265. 1886.—Bailey, Bull, Mich. Agr. Col. 31: 37. 1887.—*Red French*. Bailey, l. c. 38. *Piment*

Although a well-fixed variety, elongated and very oblate forms of the fruit occasionally appear, especially from seed received under the name Cranberry.—Plate 28, f. 2 and 4.

airelle rouge. Vilmorin-And. Cat. 1891.—French, *Piment cerise*.—German, *Kirschförmiger rother Pfeffer*.

Capsicum cerasiforme Miller, Gard. Dict. 1771 [no. 5. ed. 6].—Lam. Enc. Meth. 2: 26. 1793 [no. 2391].—Linn. Sp. Pl. 1: 1051. 1797 [ed. Willd.].—Poiret, Enc. Meth. 5: 325. 1804.—Persoon, Syn. Pl. 1: 230. 1805.—Aiton, Hort. Kew. 1: 406. 1810.—Hornem. Hort. Hafn. 1: 223. 1813.—Linn. Syst. 4: 563. 1819 [ed. Röm. et Schult.].—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Roxb. Fl. Ind. 1: 574. 1832.—Fingerh. Monogr. 19. t. 5. f. b. 1832.—Don, Hist. Dich. Pl. 4: 446. 1838.—Dunal in DC. Prodr. 13¹: 422. 1852.—Miquel, Fl. Ned. Ind. 2: 660. 1856.

Capsicum annum β Aiton, Hort. Kew. 1: 253. 1789.

Capsicum annum Miller, Gard. Dict. 1797 [ed. Martyn]. (In part.)

Capsicum sphaericum Willd. Enum. Hort. Berol. 1: 241. 1809.—Linn. Syst. 4: 561. 1819 [ed. Röm. et Schult.].—Hornem. Hort. Hafn. Suppl. 27. 1819.—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Fingerh. Monogr. 28. t. 9. f. a. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 427. 1852.

Capsicum Milleri Linn. Syst. 4: 563. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. 20. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 422. 1852.

Capsicum cerasiflorum Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.

Capsicum cerasiforme minus Fingerh. Monogr. 20. 1832.—Dunal in DC. Prodr. 13¹: 422. 1852.

Capsicum cerasiforme maurocarpum Dunal, l. c.

Capsicum cerasiforme cerasiflorum Dunal, l. c.

Capsicum grossum cerasiformis Hooker, Fl. Brit. Ind. 4: 239. 1885.

Siliquastrum variatas rotundum. Camer. Pl. Epit. 348. f.* 1586.

Capsicum siliquis rotundis cerasi forma. Bauhin. Phytopanax 156. 1596.

Piper cum siliqua rotunda cerasorum modo. Greg. de Reg. in Clus. Cur. Post. 99-100. f. 7. 1611.—Jonstonus, Dendrog. t. 56. 1662.—Raius, Hist. Pl. 1: 677. 1686.

Piper Indicū siliquis surrectis rotundis. diff. 2. Rotundum minus parum acuminatum. Bauhin. Pinax 103. 1623.

Piper Indicum propendentibus siliquis rotundis. diff. 4. Siliqua rotunda. Cerasorum modo. Bauhin. Pinax 102. 1623.

Piper Indicum siliquis surrectis cerasi forma. Bauhin. Pinax 103. 1623.—Raius, Hist. 678. 1686.

Capsicum rotundioribus siliquis. Gerarde, Herball 364-365. f. 7. 1636.

Capsicum siliqua rotunda Cerasorum. Parkinson, Theat. Bot. 357-358. f. 11. 1640.

YELLOW CHERRY.† Identical with the preceding except that the fruit is of a yellow color. Not universally catalogued by seedsmen.—Plate 28, f. 2.

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- Piper rotundum majus surrectum.* Jonstonus, *Dendrog. t. 56.* 1662.
Capsicum arborescens, fructu cerasino. Munting, Waare Oeffen. Pl. 342. 1682.
Capsicum frutescens, fructu cerasino. Munting, Warre Oeffen. Pl. 341. 1682.
Capsicum siliquis surrectis Cerasi forma. Magnol, Hort. Reg. Monsp. 42. 1697.
Capsicum sive Piper Indicum propendentibus siliquis rotundis. Morison, Hist. Pl. Oxon. 3: 529. 1699.
Capsicum sive Piper Indicum siliquis Cerasi forma. Morison, Hist. Pl. Oxon. 3: 530. 1699.
Capsicum sive Piper Indicum siliqua rotunda Cerasorum forma. Morison, Hist. Pl. Oxon. 3: 529. 1690.
Solanum urens siliqua propendente rotunda, etc. Morison, l. c. Sect. 13. t. 2. f. 14.
Solanum Capsicum dictum, propendentibus siliquis rotundis. Hermann, Hort. Acad. Lugd.-Bat. 576. 1687.
Capsicum siliquis surrectis, Cerasi forma. Tournef. Inst. 153. 1700.—Tillus, Cat. Pl. Hort. Pisa. 30. 1723.
Capsicum siliqua propendente, Cerasi forma. Tournef. Inst. 153. 1700.—Tillus, Cat. Pl. Hort. Pisa. 20. 1723.
Capsicum siliquis surrectis, rotundis. Tournef. 153. 1700.—Miller, Gard. Dict. 1771 [6th ed.].
Capsicum siliquis surrectis, rotundis, parum acuminatis. Tournef. Inst. 153. 1700.
Capsicum fructu rotundo, maximo. Tournef. Inst. 153. 1700. (In part.).—Tillus, Cat. Pl. Hort. Pisa. 30. 1723.—Miller, Gard. Dict. 1771 [6th ed.].
Capsicum; Americanum, fructu rotundo, Cerasorum forma. Miller, Gard. Dict. 1731 [no. 16].
Capsicum; fructu rotundo, majore, nunc erecto, nunc nutante rubro. Miller, Gard. Dict. 1731 [no. 10].
Solanum Capsicum fructu erecto rubro rotundo. Weinmann. Phyt. 349. t. 929. f. a. 1745.
Solanum mordens fructu rotundo. Weinmann. Phyt. 349. t. 928. f. f. 1745.

† *Yellow Fruited Cherry Pepper.*—Burr, Field and Gard. Veg. 621. 1863.—French, *Piment cerise jaune.*—German, *Kirschförmiger gelber Pfeffer.*

Capsicum cerasiforme luteum Hort. Vilmorin-And. Fl. Pleine Terre 885. 1870 [3d ed.].

*** Fruit 1-1½ in. in diameter, usually heart-shaped.

OXHEART.* Plant 1-2½ ft. high. Branches few, stout, quite erect. Fruit usually heart-shaped, sometimes oblate,

* Bailey, Bull. Mich. Agr. Col. 31: 38. 1887.

Capsicum cordiforme Miller, Gard. Dict. 1771 [no. 2. 6th ed.].—Linn. Syst. 4: 561. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. 29. t. 9. f. c. 1832.—Don, Hist. Dich. Pl. 4: 445. 1838.—Dunal in DC. Prodr. 13¹: 427. 1852.—Miquel, Fl. Ned. Ind. 2: 658. 1856.—Reichenb. Ic. Fl. Germ. 20. pl. 13. f. 3. 1862.—Miquel, Mus. Lugd.-Bat. 3: 117. 1867.

Capsicum cordiforme majus Fingerh. l. c.—Dunal, l. c.

Capsicum cordiforme minus Fingerh. l. c.—Dunal, l. c.

Capsicum cordiforme subangulosum Fingerh. l. c.—Dunal, l. c.

Capsicum cordiforme olivaeforme Fingerh. l. c.—Dunal, l. c.

Capsicum annuum cordiforme Sendt. in Martius, Fl. Bras. 10: 148. 1846.

Capsicum cordiforme cerasicarpum.—Dunal, l. c.

Siliquastrum Cordatum. Camer. Pl. Epit. 348. f. t. 1586.

Capsicum siliquis latis cordatis. Bauhin. Phytopinax 156. 1596.

Piperis indicī varitas. Matth. Opera 434. f. 1598.

Piper cordatum. Greg. de Reg. in Clus. Cur. Post. 99. f. 5. 1611.—Raius, Hist. Pl. 1: 677. 1686.

Piper Indicū siliquis surrectis rotundis. diff. 3. cordatū majus, diff. 4. cordat. min. angulosū. Bauhin. Pinax 103. 1623.

Piper Indicū propendentibus siliquis rotundis. diff. 2. siliqua cordata. Bauhin. Pinax 102. 1623.

Capsicum cordatum erectum majus, ditto, minus. Parkinson, Theat. Bot. 357. 1640.

Capsicum cordatum propendens. Parkinson, Theat. Bot. 357. f. 9. 1640.—Sloane, Hist. Jam. 114. 1696.

Figure without name. Hernandez, Novae Hist. Romae. 136. 1651.

Piper cordatum. Jonstonus, Dendrog. t. 56. 1662.

Piper Cordatum surrectum majus, ditto, minus. Jonstonus, Dendrog. t. 56. 1662.

Piper rotundum majus surrectum. Raius, Hist. Pl. 1: 677. 1686. (In part.)

Capsicum cordatum siliqua surrecta. Magnol, Hort. Reg. Monsp. 42. 1697.

Capsicum sive Piper Indicū cordatum, majus & minus. Morison, Hist. Pl. 3: 530. 1699.

Capsicum seu Piper Indicū siliqua cordata. Morison, Hist. Pl. Oxon. 3: 529. 1699.

Solanum urens fructu cordato. Morison, l. c. Sect. 13. t. 2. f. 12.

Capsicum siliqua propendente, rotunda & cordiformi. Tournef. Inst. 153. 1700.—Tillus, Cat. Pl. Hort. Pisa. 30. 1723.—Miller, Gard. Dict. 1771 [6th ed.].

spherical, or subconical, 1-1½ in. diam., very smooth, glossy, rarely obscurely wrinkled or furrowed; flesh about ½ in. thick, dark red, very pungent.

YELLOW OXHEART.* A yellow form of the Oxheart variety has been known, but now seems to have dropped out of cultivation.

A A Shrubby, perennial.

a Fruit oblong, acuminate, usually embraced by calyx.

C. FRUTESCENS L.

Capsicum frutescens Linn. Hort. Cliff. 60. 1737; Sp. Pl. 189. 1753; 271, 1762 [ed. 2], (in part).—Gouan, Hort. Monsp. 111. 1762.—Miller, Gard. Dict. 1771 [ed. 6. no. 9].—Aublet, Hist. Pl. Guiane 1: 219. 1775.—Linn. Syst. 14: 227. 1784 [ed. 14. Murray].—Aiton, Hort. Kew. 1: 254. 1789.—Loureiro, Fl. Coch. 1: 128. 1790; 1: 158. 1793 [ed. Willd.].—Lam. Enc. Meth. 2: 26. 1793 [no. 2395].—Linn. Sp. Pl. 1: 1051. 1797 [ed. Willd.].—Miller, Gard. Dict. 1797 [ed. Martyn].—Poiret, Enc. Meth. 5: 325. 1804.—Persoon, Syn. Pl. 1: 230. 1805.—Hornem. Hort. Hafn. 1: 224. 1813.—Kunth, Nov. Gen. Sp. Pl. 3: 48. 1818.—Linn. Syst. 4: 563. 1819 [ed. Röm. et Schult.].—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Moon, Cat. Brit. Ind. 16. 1824.—Fingerh. Monogr. 17. t. 4. f. c. 1832.—Roxb. Fl. Ind. 1: 574. 1832.—Nees von Esenb. Trans. Linn. Soc. 17: 63. 1837.—Don, Hist. Dich. Pl. 4: 446. 1838.—Sendt. in Mar.

Capsicum siliqua propendente, oblonga & cordiformi. Tournef. Inst. 153. 1700.—Tillus, Cat. Pl. Hort. Pisa. 30. 1723.

Piper Indicum cordatum. Hort. Eyst. 1. Autum. Ord. 1: 13. f. 2. 1718.

Piper Indicum cordatum oblongum. Hort. Eyst. 1. c. f. 1.

Capsicum; fructu Cordiformi, plerumque nutante rubro. Miller, Gard. Dict. 1731 [no. 7].

Solanum mordens fructu erecto cordiformi rubro. Weinmann. Phyt. 349. t. 929. f. c. 1745.

Capsicum fructu cordiformi erecto. Haller, Hort. Gott. 216. 1753.

* *Capsicum cordiforme globosum* Fingerh. Monogr. 30. t. 10. f. c. 1832.—Dunal in DC. Prodr. 13: 427. 1852.

Capsicum strictum Fingerh. Monogr. 21. t. 5. f. a. 1832.—Dunal in DC. Prodr. 13: 422. 1852.

Capsicum; fructu Cordiformi, nunc erecto, nunc nutante flavo. Miller, Gard. Dict. 1731 [no. 12].

Solanum mordens, fructu erecto cordiformi, luteo. Weinmann. Phyt. 349. t. 929. f. b. 1745.

Capsicum fructu cordiformi minori luteo. Browne, Hist. Jam. 176. 1756.

- tius, Fl. Bras. 10: 142. 1846.—Hooker, Niger Fl. 162. 1849.—Dunal in DC. Prodr. 13¹: 413. 1852.—Miquel, Fl. Ned. Ind. 2: 660. 1856.—Grisebach, Fl. Ind. 436. 1864.—Hemsley, Biol. Cent.-Am. 2: 423. 1881-82.—Hooker, Fl. Brit. Ind. 4: 239. 1885.—Gray, Syn. Fl. 2: 231. 1888.—Chapman, So. Fl. 323. 1896.
- Capsicum minimum* Miller, Gard. Dict. 1771 [no. 10. ed. 6].—Moon, Cat. Pl. Cey. 16. 1824.—Roxb. Fl. Ind. 1: 574. 1832.—Miquel, Fl. Ned. Ind. 2: 659. 1856.—Dunal in DC. Prodr. 13¹: 415. 1852.
- Capsicum conicum* Lam. Enc. Meth. 2. 1793 [no. 2890].—Poiret, Enc. Meth. 5: 327. 1804.
- Capsicum Havanense* Kunth, Nov. Gen. Sp. Pl. 3: 48. 1818.—Don, Hist. Dich. Pl. 4: 446. 1838.
- Capsicum Comarim* Vell. Fl. Flum. Repr. in Rio de Jan. Arch. Mus. Nac. 5: 59. 1881.
- Capsicum odoriferum* Vell. l. c. 60.—Fide Index Kewensis.
- Capsicum toxicarium* Pöppig.—Fingerh. Monogr. 32. 1832.—Fide Index Kewensis.
- Capsicum frutescens minus* Fingerh. Monogr. 17. 1832.—Dunal in DC. Prodr. 13¹: 413. 1852.
- Capsicum fastigiatum* (Blume). Nees von Esenb. Trans. Linn. Soc. 17: 64. 1832.—Don, Hist. Dich. Pl. 4: 446. 1838.—Wight, Illustr. Ind. Bot. 2: 198. 1850.—Dunal in DC. Prodr. 13¹: 416. 1852.—Miquel, Fl. Ned. Ind. 2: 659. 1856.
- Capsicum cereolum* Bertol. Hort. Bonon. Pl. Nov. 1: 6. t. 2. 1838.—Fide Index Kewensis.
- Capsicum odoratum* Steud. Nom. 1: 279. 1840.—Fide Index Kewensis.
- Capsicum flexuosum* Sendt. in Martius, Fl. Bras. 10: 143. 1846.—Dunal in DC. Prodr. 13¹: 413. 1852.
- Capsicum Abyssinicum* A. Rich. Fl. Abyss. 2: 96. 1851.
- Capsicum chlorocladum* Dunal in DC. Prodr. 13¹: 415. 1852.—Hemsley, Biol. Cent.-Am. 2: 423. 1881-82.
- Capsicum crispum* Dunal in DC. Prodr. 13¹: 415. 1852.
- Capsicum frutescens multilobatum* Dunal, l. c. 413.
- Capsicum flexuosum Perrottetii* Dunal, l. c.
- Capsicum crispum Piper rabiosum* Dunal, l. c. 416.
- Capsicum annuum frutescens* Kuntze, Revis. Gen. Plant. 449. 1891.
- Capo-Malago. Rheede, Hort. Malab. 2: 109. t. 56. 1679.
- Capsicum* sive *Piper Indicum* siliqua longa gracile Corallii coloris. Morison, Hist. Pl. Oxon. 3: 529. 1699.
- Capsicum* sive *Piper Barbadiense* fructu *Berberidis* acerrimo. Morison, Hist. Pl. Oxon. 3: 530. 1699.
- Spur-Pepper. Hughes, Hist. Barb. 213. 1750.—Fide Maycock, Fl. Barb. 104. 1830.

Plants shrubby, perennial, 2½–6 ft. high. Branches angular, often channeled, puberulent, or pubescent, especially on the younger portions, usually greatly enlarged

at the nodes, green, or sometimes purplish striate, slightly purple at the nodes. Leaves broadly ovate acuminate, 3-6 in. long, 2-3½ in. wide, usually puffed or wrinkled, more or less pubescent especially along the veins. Petioles medium, usually subciliate. Peduncles slender, 1-2 in. long, often in pairs, usually longer than the fruit. Calyx usually cup-shaped embracing base of the fruit, teeth short. Corolla white or greenish-white, spreading ¾-¾ in., often with ocherous markings in the throat. Fruit red, ovate, obtuse, or oblong acuminate, ¾-1½ in. long, ¼-¾ in. diam.

As the fruit of this species does not ripen freely except in tropical and subtropical latitudes it is not grown commercially in the north. However a number of cultivated varieties from Mexico and Brazil,* which evidently belong to this species, have been grown by Dr. Sturtevant at Geneva, New York, and by the writer at the Missouri Botanical Garden. By starting them early in the season with the aid of artificial heat most of the varieties produced some ripe fruit. The plants however did not attain the size and vigor which they reach in their native habitat. The fruit is often called "bird pepper."

a a Fruit ovate or subround, usually seated on the calyx.

C. frutescens baccatum (L.).†

Capsicum baccatum Linn. Mant. 47. 1767.—Aiton, Hort. Kew. 1: 253. 1789.—Linn. Syst. 226. 1784 [ed. 14 Murray].—Loureiro, Fl. Cochín 1: 127. 1790; 1: 157. 1793 [ed. Willd.].—Lam. Enc. Meth.

* The following varieties sent from Mexico by Dr. Palmer are referred to this species:—*Chili de arbol*, *Chili pico de pijaro*, *Chili Piquin*, *Chili Unque*, and *Mirasol*, together with the following sent from Brazil by Prof. O. A. Derby:—*Pimentas cemerim grande*, *Pimentas dido de dama*, *Pimentas Malagueta*, and *Pimentas pitanga*.

† Supposed wild specimens examined from Bolivia (Bang, no. 1126, 1891); Paraguay (Morong, no. 961, 1888-90); Mexico (Pringle, 1888); Texas (Pammel, 1888; Trelease, 1897).

The following varieties sent from Brazil by Prof. Derby are referred to this group:—*Pimentas Mariana*, and *Pimentas Cumary*, together with one from Mexico by Dr. Palmer,—*Chiltepin*.

- 2: 26. 1793 [no. 2393].—Linn. Sp. Pl. 1: 1050. 1797 [ed. Willd.].—Poiret, Enc. Meth. 5: 325. 1804.—Persoon, Syn. Pl. 1: 229. 1805.—Hornem. Hort. Hafn. 1: 224. 1813.—Kunth, Nov. Gen. Sp. Pl. 3: 48. 1818.—Linn. Syst. 4: 564. 1819 [ed. Röm. et Schult.].—Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Fingerh. Monogr. 18. t. 4. f. a. 1832.—Don, Hist. Dich. Pl. 4: 447. 1838.—Sendt. in Martius, Fl. Bras. 10: 146. 1846.—Dunal in DC. Prodr. 13¹: 420. 1852.—Miquel, Fl. Ned. Ind. 2: 660. 1856.—Grisebach, Fl. British W. Ind. 436. 1864.—Hemsley, Biol. Cent.-Am. 2: 423. 1881-2.—Gray, Syn. Fl. 2: 231. 1888.
- Capsicum pulchellum* Salisb. Prodr. 134. 1796.—Fide Index Kewensis.
- Capsicum microcarpum* DC. Cat. Hort. Monsp. 86. 1813.—Hooker, Niger Flora 162. 1849.—Don, Hist. Dich. Pl. 4: 446. 1838.—Linn. Sp. Pl. 4: 565. 1819 [ed. Röm. et Schult.].—Sendt. in Martius, Fl. Bras. 10: 146. 1846.—Dunal in DC. Prodr. 13¹: 420. 1852.—Fingerh. Monogr. 19. t. 4. f. b. 1832.
- Capsicum globiferum* Meyer, Fl. Esseq. 113. 1818.—Linn. Syst. 4: 808. 1819 [ed. Röm. et Schult.].—Fingerh. Monogr. 19. 1832.—Don, Hist. Dich. Pl. 4: 446. 1838.—Dunal in DC. Prodr. 13¹: 421. 1852.
- Capsicum micranthum* Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.—Don, Hist. Dich. Pl. 4: 447. 1838.
- Capsicum ciliare* Link, Enum. Pl. Hort. Reg. Berol. 1: 190. 1821.
- Capsicum Cumanense* Fingerh. Monogr. 17. 1832.—Dunal in DC. Prodr. 13¹: 417. 1852.
- Capsicum Willdenowii* Don, Hist. Dich. Pl. 4: 447. 1838.
- Capsicum villosum* Sendt. in Martius, Fl. Bras. 10: 144. 1846.—Dunal in DC. Prodr. 13¹: 418. 1852.
- Capsicum villosum latifolium* Sendt. l. c. 145.—Dunal, l. c. 419.
- Capsicum villosum muticum* Sendt. l. c.—Dunal, l. c.
- Capsicum campylopodium* Sendt. l. c. 144.—Dunal, l. c. 416.
- Capsicum Schottianum leptophyllum*. Dunal, l. c.
- Capsicum mirabile* (Mart.) Sendt. l. c.—Dunal, l. c. 417.
- Capsicum mirabile grandiflorum* Sendt. l. c.—Dunal, l. c.
- Capsicum Schottianum* Sendt. l. c.—Dunal, l. c. 416.
- Capsicum Rabenii* Sendt. l. c. 145.—Dunal, l. c. 419.
- Capsicum parvifolium* Sendt. l. c.—Dunal, l. c.
- Capsicum parvifolium Sellowianum* Dunal, l. c.
- Capsicum hispidum* Dunal, l. c.—Hemsley, Biol. Cent.-Am. 2: 423. 1881-82
- Capsicum hispidum glabriusculum* Dunal, l. c. 420.
- Capsicum glandulosum* Dunal, l. c. 417.
- Capsicum laurifolium* Dunal, l. c. 418.
- Capsicum salicifolium* Dunal, l. c.
- Capsicum gracillipes* Dunal, l. c.
- Capsicum angustifolium* Dunal, l. c. 420.
- Capsicum microphyllum* Dunal, l. c. 421.
- Capsicum annuum baccatum* Kuntze, Revis. Gen. Plant. 449. 1891.
- Capsicum brevioribus siliquis*. Lobel, Pl. Hist. 172. f. 1676.

- Siliquastrum rotundum angustifolium*. Bassaeus, *Elcones* 859. *f.* 1590.—
 Tabern. *Kreuterbuch* 2: 530. *f.* 1591; Volkom. *Kreuterbuch* 2: 559.
f. 1613.
- Capsicum*, *Piper Indicum brevioribus siliquis*. Lobel. *Icones Stirp.* 817.
 1591.
- Capsicum Brasilianum*. Garcias ab Horto, *Aromatum* 388. 1593.—Clus.
Exot. 340. *f.* 1605.—Pancovius. *Herb. f.* 297. 1673.
- Capsicum minimis siliquis*. Gerarde, *Herball* 292. *f.* 2. 1597; 364. *f.*
 3. 1636.—Dodon. *Hist. Stirp. Antv.* 705. 1583; 717. 1616.
- Piper Brasilianum*. Greg. de. Reg. in Clus. *Cur. Post.* 104. 1611.
- Capsicum minus Brasilianum*. Parkinson, *Theat. Bot.* 356-357. *f.* 1640.
- Quiya apua*. Marcg. in Piso, *De Med. Bras.* 39. 1648.
- Piper siliquosum magnitudinis baccarum Asparagi*. Bauhin, *Hist. Pl.* 2:
 944. *f.* 1651.
- Capsicum Brasilianum fructu rotundo*. Munting, *Waare Oeffen. Pl.*
 341. 1682.
- Capsicum minus fructu rotundo, erecto, parvo, acerrimo*. Sloane, *Cat.*
Pl. Jam. 111. 1696.
- Capsicum sive Piper Brasilianum fructu erecto è rotundo oblongo*
minimo. Morison, *Hist. Pl. Oxon.* 3: 530. 1699.
- Capsicum minus rubrum*. Rumph. *Herb. Amboin.* 5: 248. *t.* 88. *f.* 2. 1747.
- Capsicum*; *fructu parvo, rotundo, acerrimo*. Miller, *Gard. Dict.* 1731
 [no. 15].

Plants 1-3 ft. high, under cultivation often 6 ft. Branches numerous, slender, fastigiate, flexuose, usually quite densely purple striate, scabrous, pubescent. Leaves ovate acuminate, rather abruptly narrowing into the petioles, solitary or in twos, more or less pubescent along the veins and sometimes on the surface. Petioles short, usually hairy, broadened at base. Peduncles solitary or in twos, extra axillary, vertical (giving a peculiar character to the plant), slender, 1-1½ in. long, smooth or on young specimens subhairy. Calyx short, cyathiform, subhairy, subciliate. Corolla small, spreading about ½ in., greenish white. Fruit ovate or subround, about ¼ in. diam. Unripe fruit sometimes changing from green to blackish spotted, finally ripening into a red or yellow.

The following garden varieties have not been sufficiently studied by me for satisfactory arrangement in the synopsis:— *Yellow Gem*, Williams' Cat. 1878.— *Tom Thumb*, Batchelor, 1887.— *Boston Squash*, *Cheese*, *Golden Dwarf*, *Red Upright*, *Yellow Mango*, Bailey, Annals of Horticulture 1889: 125.— *Galveston Red*, *Weissfrüchtiger Pfeffer*, Haage & Schmidt, Cat. 1893.— *Black Fruited Chili*, *Scarlet Maddaloni*, Benary, Cat. 1893-4.— *Columbus goldgelber Pfeffer*, *Columbus rother Pfeffer*, *Sirius Pfeffer*, *Violetter Pfeffer*, Haage & Schmidt, Cat. 1897.

The following species, apparently not in cultivation in Europe or the United States, and of which I have not seen authentic material, cannot be placed in the preceding synopsis because of the absence of certain essentials from such descriptions as I have seen. Those in italics are introduced into the synopsis as synonyms on the authority of the Index Kewensis.

- CAPSICUM CONOIDEUM* Miller, Gard. Dict. 1768 [no. 1. ed. 8].
CAPSICUM CHINENSE Jacq. Hort. Vindob. 3: 38. t. 67. 1776.
Capsicum pulchellum Salisb. Prodr. 134. 1796. = *C. frutescens baccatum*.
CAPSICUM PUBESCENS Ruiz & Pav. Fl. Per. 2: 30. 1797.
CAPSICUM CAERULESCENS Bess. Cat. Hort. Crem. 27. 1811.
Capsicum Tournefortii Bess. l. c. = *C. annum longum*.
Capsicum torulosum Hornem. Hort. Hafn. Suppl. 27. 1819. = *C. annum acuminatum*.
CAPSICUM AGGREGATUM Willd. Herb.— Linn. Syst. 4: 809. 1819 [ed. Röm. et Schult.].
Capsicum Quitense Willd. Herb.— Linn. Syst. l. c. = *C. annum longum*.
CAPSICUM DICHOTOMUM Vell. Fl. Flum. Repr. in Rio de Jan. Arch. Mus. Nac. 5: 60. 1881.
CAPSICUM INAEQUALE Vell. l. c. 59.
Capsicum odoriferum Vell. l. c. 60. = *C. frutescens*.
Capsicum toxicarium Pöppig.— Fingerh. Monogr. 32. 1832. = *C. frutescens*.
CAPSICUM USTULATUM Paxton, Mag. Bot. 5: 197. 1838.
Capsicum cereolum Bertol. Hort. Bonon. Pl. Nov. 1: 6. t. 2. 1838. = *C. frutescens*.
Capsicum odoratum Steud. Nom. 1: 279. 1840 [ed. 2]. = *C. frutescens*.

CAPSICUM BAUHINI Dunal in DC. Prodr. 13¹: 428. 1852.

CAPSICUM HORNEMANNI Dunal, l.c. 429.

Capsicum pubescens Dunal, l. c. 421. = *C. frutescens* baccatum.

Capsicum Narunca Dunal, l. c. 414. = *C. annuum* longum.

CAPSICUM MAXIMOWICZII Regel & Rach, Ind. Sem. Hort. Petrop. 40. 1858.

CAPSICUM NEPALENSIS Drury, Useful Pl. Ind. 112. 1858.

CAPSICUM ANOMALUM Franch. & Sav. Enum. Pl. Jap. 2: 452. 1879.

CAPSICUM RACEMIGERME (?) Veitch, Traveler's Notes 178. 1896.

The following species apparently does not belong to this genus: —

CAPSICUM TORULOSUM Vell. Fl. Flum. Repr. in Rio de Jan. Arch. Mus. Nac. 5: 59. 1881.

EXPLANATION OF PLATES ILLUSTRATING CAPSICUM.

All of the illustrations were drawn from nature or from original photographs by Miss Grace E. Johnson, under supervision of the author. Except where otherwise stated all figures are of natural size.

Plate 8.—Details of flower and fruit. 1, flowers in different stages of expansion; 2, open flower bud $\times 3$; 3, flower and opened corolla; 4, a stamen from back, front and side $\times 5$; 5, one-celled cherry pepper, in cross section; 6, two, three, and four-celled forms of the larger peppers, in cross section.

Plate 9.—1, *Capsicum frutescens*; 2, Coral Gem; 3, Orange-red Cluster; 4, Red Cluster.

Plate 10.—1, Chilli; 2, Yellow Chilli; 3, two forms of Long Cayenne.

Plate 11.—1, two forms of Nepal Chilli; 2, Ivory Tusk.

Plate 12.—1, Yellow Cayenne; 2, Long Yellow.

Plate 13.—1, Cardinal; 2, Elephant's Trunk.

Plate 14.—1, County Fair; 2, Procopp's Giant:—both reduced.

Plate 15.—1, Procopp's Giant; 2, A slightly tapering form of Emperor.

Plate 16.—Monstrous.

Plate 17.—Sweet Spanish, natural size and reduced.

Plate 18.—Oblate forms of Bell.

Plate 19.—1, Bell; 2, Sweet Mountain:—both reduced.

Plate 20.—Sweet Mountain.

Plate 21.—1, Ruby King; 2, Golden Dawn.

Plate 22.—1, Golden King; 2, Golden Upright.

Plate 23.—Short form of Brazilian Upright with cross and longitudinal sections showing position of the seeds.

Plate 24.—Squash, usual and less grooved forms.

Plate 25.—1, Squash; 2, Celestial; 3, Kaleidoscope:—all reduced.

Plate 26.—1, Celestial; 2, Kaleidoscope.

Plate 27.—1, Kaleidoscope; 2, Etna; 3, Red Wrinkled; 4, Little Gem.

Plate 28.—1, Occasional form of Red Wrinkled; 2, Cherry; 3, Yellow Cherry; 4, Cranberry,—usual, conical, and elongated forms; 5, Oxheart.

FOUR INCHES, DIVIDED INTO TWELFTHS.

FLOWER AND FRUIT OF CAPSICUM.

70 240
240 240

C. FRUTESCENS AND C. ANNUUM, VARS.

C. ANNUM ACUMINATUM.

C. ANNUM ACUMINATUM AND LONGUM.

C. ANNUM ACUMINATUM AND LONGUM.

C. ANNUUM LONGUM.

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1940-1941

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C. ANNUM LONGUM AND GROSSUM.

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California

ALBONIA

INDEXES TO NAMES OF CAPSICUMS.

POPULAR NAMES.

(*Synonyms in Parenthesis.*)

- American bonnet pepper**, (87).
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 Yellow Spanish, 84.
 Yellow squash, 88.
 Yellow wrinkled, 91.

SPECIES AND BOTANICAL VARIETIES.

(Synonyms in Parenthesis.)

- Abyssinicum, (98).
 aggregatum, 102.
 angulosum, (81).
 — conicum, (81).
 — macrocarpum, (81).
 — ovale, (81).
 angustifolium, (100).
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 — abbreviatum, 88.
 — acuminatum, 69, (70).
 — angulosum, (81).
 — cerasiforme, 92.
 — conoides, 65.
 — cordiforme, (96).
 — erectum, (74).
 — fasciculatum, 68.
 — frutescens, (98).
 — grossum, 80, (81).

 annuum, longicarpum, (74).
 — longum, 73, (74).
 — ovoideum, (74).
 — proboscideum, (80).
 — rugosum, (81).
 — rugulosum, (81).
 — subangulosum, (74).
 — tetragonum, (87).
 anomalum, 103.
 Axi, (81).

 baccatum, (99).
 Bauhini, 103.
 bicolor, (76).
 — purpureum, (77).

 caerulescens, 102.
 campylopodium, (100).

- cerasiflorum, (94).
 cerasiforme, (94).
 — cerasiflorum, (94).
 — luteum, (95).
 — maurocarpum, (94).
 — minus, (94).
 ceratocarpum, (80).
 cereolum, (98, 102).
 Chamaecerasus, (81).
 Chilense, (70).
 Chinense, 102.
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 ciliare, (100).
 Comarim, (96).
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 — chordale, (65).
 — oblongo-conicum, (65).
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 — cerasicarpum, (96).
 — globosum, (97).
 — majus, (96).
 — minus, (96).
 — olivaeforme, (96).
 — subangulosum, (96).
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 — Piper rabiosum, (98).
 Oumanense, (100).
 curvipes, (73).
 cydoniaeforme, (87).
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 — minus, (98).
 — multilobatum, (98).
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 globiferum, (100).
 gracilipes, (100).
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 — angulosum, (81).
 — bifidum, (81).
 — cerasiformis, (94).
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 — globosum, (81).
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 — glabriusculum, (100).
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 — incrassatum, (78).
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Willdenowii, (100).

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